AL SIRÁJIYYAH

OR THE

Mahommedan Law of Inheritance

REPRINTED FROM THE TRANSLATION OF
SIR WILLIAM JONES, PUBLISHED AT CALCUTTA, IN 1792;

WITH NOTES AND APPENDIX

BY

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PREFACE

In the first page of the work here reprinted the reader will find these, remarkable words, "The Prophet of God (on whom be His blessing and peace) said : 'Learn the laws of inheritance, and teach them to the people ; for they are one half of useful knowledge.' " In truth, the rules of succession must necessarily assume, in countries where the power of testamentary disposition is limited,* an importance altogether out of proportion to that which they have with us. Accordingly we find that decisions on the law of inheritance were delivered from the pulpit, and that the study of its various ramifications was not deemed to be beneath the notice of those who enjoyed the highest reputation as sages and as divines. It seldom happens that people professing the same faith can universally agree as to the interpretation of a given text ; and, as the passage of the Koran from which the maxims of Moohummudan inheritance are primarily derived is somewhat loosely written, it is not surprising that the rival sects of Omar and Ali, though both looking to the same original source of light, should have arrived at different conclusions on several branches of so momentous a subject. With the system of Shia sect, the followers of Ali, we have nothing to do here, for the work before us is an authoritative digest of the rules of

* A Mahommedan can only dispose of one-third of his property by will, see p. 12.

succession adopted by the Hanifite* branch of the Suuni sect, or disciples of Omar.

We know very little of the man to whose industry and energy we owe the compilation of the Sirájiyyah. Sir William Jones tells us indeed, in the preface to his translation, that the author was one Shaikh Sirájud'din a native of Sejávend ; but he records neither the date of the sage's birth nor the events of his life. It is well known, however, that his work is considered to be of the highest authority, and we have reason to be grateful to Sir William Jones for having issued a translation of this important text-book, with the guarantee afforded by his great reputation as an Oriental linguist.

The first edition of this reprint was published in 1869 ; references are now given to several works which have since been added to our libraries of Indian Law ; these are, in order of date :—

"The Tagore Law Lectures for 1873" ; containing copious, though not very well arranged, information on inheritance and cognate subjects.

Baillie's "Mohummudan Law of Inheritance," second edition ; containing a full account of the law of inheritance, better arranged than in the lectures above-mentioned.

Rumsays "Moohummudan Law of Inheritance ; and Rights and Relations affecting it," in which the present writer has endeavoured to deal fully and clearly with the intricacies of the law of inheritance, and to describe briefly the branches of law connected with it, such as marriage, dower, and testamentary disposition.

Ali's "Personal Law of the Mahommedans," the work of an accomplished lawyer, embracing in its scope

*With occasional allusions, however, to the distinctive doctrines of other branches.

(unlike any other existing treatise) all the four Sunni sects, and the Shia and Mutazala doctrines.

The "Minhádj at-tálibin," an Arabian work of authority on the Shafeite branch of Sunni law, with French translation and annotations by L. W. C. Van den Berg, magnificently produced by the Netherlands Colonial Government at Batavia.

The "Anglo-Indian Codes." a collection of some of the most important Acts of our Indian Government, with notes, &c., by Whitley Stokes, formerly law-member of the Governor-General's Council.

The last mentioned book, it need hardly be said, is not a work on Mahommedan law ; I have only referred to it as pointing out a species of land-mark laid down by the High Court between Mahommedan and general law.* I have to acknowledge my obligations to the Tagore lecturer, and to Mr. Baillie, for their reproductions of certain parts of the Sharifiyyah neglected by Sir William Jones, which have assisted me in understanding the doctrine of Muhammed as to the distant Kindred,† a very special feature of the most curious and interesting system of devolution which the world has yet seen.

If the reader should think that I men tion my own "Moohummudan Law of inheritance" somewhat frequently in the following pages, I would ask him kindly to understand that I refer to it, not as to an authority, but merely as to a work in which he will find the various subjects more fully explained and illustrated than is possible in this small work by the same hand.

ALMARIC RUMSEY.

9, STONE BUILDINGS, LINCOLN'S INN.

* See chaptcr "On a lost person," note.

† See Appendix, P.,Pl.

ABBREVIATIONS
USED IN THE NOTES, APPENDIX, ETC.

c.—consanguine* (*i.e.*, by same father only).

u.—uterine (*i.e.*, by same mother only).

d. k.—. distant kindred.

g. c. m.—greatest common measure.

h. h. s.—how high soever.

h. l. s.—how low soever.

l. c. d.—least common denominator.

Ali, P.L.M.—"The Personal Law of of the Mahommedans (according to all the Schools)." By Syed Ameer Ali. London ; W. H. Allen & Co., 1880.

All—Indian Law Reports, Allahabad Series. Thacker, Spink & Co., Calcutta, & c.

Bail. M. L. I.—"The Mohummudan Law of Inheritance, according to Abu Huneefa and his followers." By Neil B. E. Baillie. Second Edition. London : Smith, Elder & Co., 1874.

Fat-i-Al.—The "Fatáwa-i-Alamgírí," as cited in the English works to which we refer.

*The author has ventured to coin this word, on the model of the French *consanguin*, which is used in the same sense. As Horace tells us :—

"————Licuit semperque licebit
Signatum præsenta nota procudere nummun."

Minh, at-tál.—The "Minhádj at-tálibín, Le Guide des Zélés Croyants" (Mahommedan law according to the doctrines of Alsháfi, Chafi,i,or Shafei*) with French translation and notes, by L. W. C. Van den Berg. Batavia : Government Press, 1882-4.

Rums M. L. I.—"The Moohummudan Law of Inheritance, and Rights and Relations affecting it. Sunni doctrine." By Almaric Rumsey. London : W. Allen & Co., 1880.

Shar.—"Al Sharifiyyah," a treatise explanatory of the Sirájiyyah. (The pages referred to are those of Sir William Jones, who appended portions to his edition of the Sirájiyyah, under the title of "A Commentary on the Sirájiyyah.")

Stokes, Ang, Ind. Cod.—"The Anglo-Indian Codes", edited by Whitley Stokes. Oxford : Clarendon Press; 1887-8.

Tag. Lect, 1873.—The Tagore Law Lectures, 1873. By Shama Churun Sircar. London : W. Thacker & Co., etc., 1873.

*The first form is used in the Sirajiyyah, the second in the work he e mentioned, the third in the Hedaya.

AL SIRAJIYYAH.

THE INTRODUCTION

IN THE NAME OF THE MOST MERCIFUL GOD

Praise *be* to God, the Lord of *all* worlds ; the praise of those who give *Him* thanks ! And *His* blessing on the best of created beings, Muhammed, and his excellent family ! The Prophet of God (on whom be his blessing and peace !) said : "Learn the laws of inheritance, and teach them to the people ; for they *are* one half of useful knowledge." Our learned in the law (to whom God be merciful) say : "There belong to the property of a person deceased four* successive duties *to be performed by the*

*It will be at once perceived that there is not any distinction here, as there is in the English law, between real and personal property. The whole property, whether movable or immovable, is applied in the order given in the text, *viz.* :—

1. Funeral expenses.
2. Debts.
3. Legacies, which are only valid to the extent of one-third of the property remaining after payment of funera expenses and debts.
4. Distribution under the law of inheritance.

It may be well to mention that the dower of the wife is a debt,

magistrate : first, his funeral ceremony and burial without superfluity of expense, yet without deficiency; next, the discharge of his just debts from the whole of his remaining effects ; then, the payment of his legacies out of a third of what remains after his debts *are* paid ; and, lastly the distribution of the residue among his successors, according to the Divine Book, to the Traditions, and to the Assent of the Learned."* They begin with the persons entitled to shares,† who are such as have each a specific share allotted to them in the book of Almighty God ; then they proceed to the residuary heirs by relation.‡ and they are all such as take what remains of

and comes, therefore, under the second head ; dower is slighty described in Appendix M., but the reader must consult other works, *e. g.*, the Hedaya, Ali, P. L. M, or Rums. M. L. I., if he requires wider information on tbe subject, for the Sirajiyyah is almost silent about it. It must be understood that, whenever we make use of the word estate or property, we mean the estate or property subject to these prior charges.

*The law of inheritance is assumed to be founded on certain passages of the Koran (see Sale's Koran, Chap. iv., quoted in Tag. Lect., 1873, 78, 79), which, however, are not sufficiently definite to solve the problems which arise in practice. The author of the Sirajiyyah was aware of this, for he qualified his reference to "the divine book" with the admission that recourse must be had also to "the traditions," and "the assent of the learned." Without such later interpretations the law of inheritance would have been a source of perpetual contention, instead of being. as it really is at the present day, a fixed, scientific, and beautifully harmonious system.

† Commonly called "shares." For enumeration of them see Appendix A.

‡Generally called simply "residuaries;" here called "residuaries by relation," as distinguished from residuaries for special cause, mentioned at p.13. For enumeration of residuaries by relations see Appendix A.

the inheritance, after those who are entitled to shares ; and, if there be only residuaries they shall take the whole property : next to residuaries for special cause, as the master of an enfranchised slave and his *male* residuary heirs*; then they return to those entitled to shares according to their respective rights of consanguinity † then to the more distant kindred ‡ ; then to the successor by contract § ; then to him who was acknowledged as a kinsman through another, so as not to prove his consanguinity, provided the deceased persisted in that acknowledgment even till he died; ‖ then to the person, to whom the whole property was left by will; ¶ and lastly to the public treasury.**

*This subject is treated at pp. 25, 26, though the words " for special cause" are not mentioned there.

† See p. 37, " On the Return."

‡ See p. 44, more fully, Rums. M. L, I., Chaps. v., vii.

§ For fuller treatment, see Rums.M.L.I., 173.

‖ *Ibid*, 177.

¶ *Ibid*. 229, 230.

**Of the classes of people here mentioned we are principally concerned with those who inherit by relationship to, or marriage with the deceased ; viz., sharers, residuaries and distant kindred. In the subsequent pages the reader will find these classes described, and their respective rights defined. It will be sufficient here to ask the reader to remember that sharers are persons who take a definite fraction, *e.g.*. one-fourth. one-third, or the like ; residuaries, those who take the residue after the sharers are satisfied, or the whole if there are no sharers, but nothing until the sharers, if any, have been deducted; distant kindred, those who get the property if there are no sharers or residuaries, but can take nothing if any sharers or residuaries exist. Possibly these general definitions may admit of some exceptions, but it is not necessary to mention such exceptions in this place. The public treasury is probably extinct, see Rums, M. L. I., 180.

ON IMPEDIMENTS TO SUCCESSION

Impediments to succession *are* four, 1. Servitude whether it be perfect or imperfect ; 2. Homicide, whether punishable by retaliation, or expiable ; 3. Difference of religion ; and 4. Difference of country, either actual, as between an alien enemy and an alien tributary ; or qualified, as between a fugitive and a tributary, or between two fugitive enemies from two different states : now a state differs from another by having different forces and sovereigns, there being no community of protection between them.*

ON THE DOCTRINE OF SHARES, AND THE PERSONS ENTITLED TO THEM.†

The *furud*,‡ or shares, appointed in the book of Almighty God, are six; a moiety, a quarter, an eighth, two-thirds, one-third, and a sixth, *some formed* by doubling, and *some* by halving. Now those entitled to

*These subjects are scarcely mentioned again in the Sirajiyyah., most of them are more fully treated in Rums, M-L-I., 181. etc. As to 3, there is no inheritance either way, between a Moslem and a non-Moslem, see Ali, P. L. M., 97, citing 6 Fat.-i-Al., 631.

† For list of sharers, see Appendix A ; for tables showing their shares under varying circumstances, Rums. M.L.I., I7.

‡ The relations who are sharers are here enumerated, but it will be found, as we proceed, that most shares are subject to variation according to circumstances, and that some persons who are primarily sharers may sometimes be residuaries also or residuaries only.

these shares are twelve-persons; four males, who are the father and the true grandfather or other male ancestor; how high soever *in the paternal line*, the brother by the mother, and the husband and eight females, who are same the wife, and the daughter, and the son's daughter, or other female descendant now low soever, the sister by one father and mother, the sister by the father's side, and the sister by the mother's side, the mother, and the true grandmother, that is, she who is related to the deceased without the intervention of a false grandfather. (A false male ancestor is, where a female ancestor intervenes in the line of ascent.*) The father takes in three cases; 1. An absolute share, which is a sixth, and that with the son, or son's son, how low soever; 2. A legal share, and a residuary portion also; and that with a daughter, or a son's daughter, how low soever in the degree of descent; 3. He has a simple residuary title, or

*" True grandfather" or "true ancestor," is thus seen to be male ancestor without any intervening female ancestor. He can therefore, only be found in one line of ascent, for he must be a direct male ancestor of the father, or, as it is sometimes expressed "father's father, how high soever." "True grandmother," or "true female ancestor," is any female ancestor between whom and the deceased no false grandfather intervenes, see above She may, therefore, be an ancestor, in the direct female line (1) of the mother, (2) of the father, (3) of any true grandfather It follows that, while, on account of the rule of exclusion by an intervening relation (see p. 27), only one true grandfather can inherit several true grandmothers can inherit at the same time. The distinction between true and false grandparents is of great importance because the latter, being distant kindred (see infra, p. 45), cannot inherit if there are any sharers or residuaries. A scheme of true and false grandparents up to five generations will be found in Rum M.L.I.,15.

failure of children and son's children, or other low descendants.* The true grandfather† has the same interest with the father, except in four cases which we will mention presently, if it please God ; but the grandfather is excluded by the father, *if he be living ;* since the father is the mean of consanguinity between the grandfather and the deceased.‡ The mother's children also take in three cases : a sixth is the share of one only ; a third, of two, or of more : males and females have an equal division and

* Hence the father has, first, one-sixth of the estate, of which nothing can deprive him. If there are sons or son's sons, how low soever, they are residuaries, and the father takes nothing more. If there are no son's or son's sons, how low soever, but there are daughters, or daughters of sons or of son's sons, how low soever, these females are sharers, but after payment of their shares and any other shares, such as the wife's or mother's, the father is a residuary, and takes all the remains, *in addition to* his indefeasible share, one-sixth. The expressions "other low descendants" and "son's daughter, how low soever," must be read with this limitation, that the descendants or daughter so mentioned must be the offspring of a son or son's son, h. i. s., for otherwise they would be d.k. (see p 45), and could take nothing while any residuaries were in existence. The father's position appears rather complicated at first sight, but it may be concisely expressed in the following short formula, which we quote from Rums, M.L.I.,27. "where there are sons h.l.s., the father takes only his share, one-sixth, and when there are none he is a residuary also."

†For definition of true grandfather see p. 15, note.

‡As to the "four cases, see Appendix A1. The true grandfather is excluded if the grandfather or an intermediate true grandfather be living, as will appear from the rules of exclusion (see p. 27) : when not excluded he stands, as we see here, in the place of the father, and has the same rights, generally, both as a sharer and as a residuary.

right;* but the mother's children are excluded by children of the deceased and by son's children,† how low soever, as well as by the father and grandfather ; as the learned agree.‡ The husband takes in two cases ; half, on failure of children, and son's children, and a fourth, with children or son's children, how low soever they descend.§

ON WOMEN

Wives take in two cases ; a fourth *goes* to one or more on failure of children, and son's children, how low soever,

*By "mother's children" are meant brothers and sister by the same mother only. It will be seen that they are sharers, whatever the sex may be, and take equally as among themselves, thus showing an exception to the rule laid down in many other cases, giving to a male the portion of two females (see *p.* 18, etc.). And they take even if the mother, through whom they are related, is living, thus forming an exception to one of the general rules of exclusion (see *p.* 27). With regard to sisters by the father only, see *p.* 21.

† *i.e.*, children of son h. l. s., *not* children h. l. s. of son, many of whom will be d.k. (see *p.* 45, etc.), and would therefore necessarily come after sharers, see *p.* 13.

‡ If there be husband, mother, two U. brothers or sisters, and brother of the whole blood, the sharers take all $\left(\frac{1}{2}, \frac{1}{6}, \frac{1}{3}\right)$ and nothing is left for the brother, who is a residuary (see *p.* 24), though he seems naturally superior to U. relations. The Shafeite lawyers avoid this anomaly by allowing him to share with the U. relations ; but they give nothing to a C. brother similarly situated ; see case of Al-Mocharrakah, 2 Minh. at-tâl., 235.

§ Here, again, it must be remembered that children of sons h. l. s., are meant ; for daughters' children, sons' daughters' children, etc. (wherever, in short, a female intervenes in the descent), are d. k. (see *p.* 45), and can only become entitled after all shares are satisfied (see *p.* 13).

and an eighth with children or son's children, in any degree of descent.* Daughters begotten by the deceased take in three cases : half *goes* to one only, and two-thirds to two or more ; and, if there be a son, the male has the share of two females, and he makes them residuaries.† The son's daughters are like the daughters begotten by the deceased ; and they may be in six cases : half goes to one only, and two-thirds to two or more, on failure of daughters begotten by the deceased ; with a single daughter of the deceased, they have a sixth, completing (*with the daughter's half*), two-thirds : but, with two daughters of the deceased, they have no share of the inheritance, unless there be, in an equal degree with, or in a lower degree than, them, a boy, who residuaries.‡ As to the remainder between them, the male has the portion of two females ; and all of the son's daughters

*See last preceding note, which is applicable here also

† *i.e.*, the daughters instead of being sharers become residuaries, but each of them takes only half as much as each son. Thus, if there are two sons and three daughters, there will be seven parts, of which each son will take two and each daughter one. A female who thus becomes a residuary in consequence of the existence of a particular male relation is called a residuary "through," or "in right of," another (see *pp.* 20, 25); for other instances see *pp.* 18-21. A female cannot thus become a residuary unless she is primarily a sharer, see *p.* 25.

‡ *i.e.*, if there be two daughters, one actual son's daughter, and one son's son h.l.s., the two daughters take two-thirds between them and thus exhaust the daughters' share, so that the son's daughter takes nothing as a sharer ; but the son's son takes two-ninths, being two-thirds of the residue, and the son's daughter takes one-ninth, being the remaining one-third. It appears, from the illustration which follows, that the same principle applies to lower stages of descent.

are excluded by the son himself.*

If a man leaves three son's daughters, some of them in lower degrees than others, and three daughters of the son of another son, some of them in lower degrees than others, and three daughters of the son's son of another son, some of them in lower degrees than others, as in the following table, this is called the case of *tashbib*.

First Set.	Second Set.	Third Set.
Son,	Son,	Son,
Son, daughter,	Son,	Son,
Son, daughter,	Son, daughter,	Son,
Son, daughter,	Son, daughter,	Son, daughter,
	Son, daughter,	Son, daughter,
		Son, daughter.

Here the eldest of the first line has none-equal in degree with her; the middle one of the first line inequalled in degree by the eldest of the second; and the youngest of the first line is equalled by the middle one of the second, and by the eldest of the third line; the youngest of the second line is equalled by the middle one of the

*And, in fact, by *any* son, even if not the father of the son's daughters, for otherwise the son's daughters would receive daughters' shares. They would thus be in a more favourable position than daughters (who would be made residuaries by the sons) or son's sons (who would be excluded by him). For actual authority on this point see Shar. 70, where it is laid down that the daughters of Omar son or son's son of Amru, are excluded by another son of Amru.

third line, and the youngest of the third set has no equal in degree. —When thou hast comprehended this, then we say ; the eldest of the first line has a moiety ; the middle one of the first line has a sixth together with her equal in degree to make up two-thirds ; and those in lower degrees never take anything, unless there be a son with them, who makes them residuaries, both her who is equal to him in degree, and her who is above him ; but who is not entitled to a share : those below him are excluded.

Sisters by the same father and mother may be in five cases : half goes to one alone ; two-thirds to two or more, and, if there be brothers by the same father and mother, the male has the portion of two females ; and the females become residuaries through him by reason of their equality in the degree of relation to the deceased ; and they take the residue, when they are with daughters or with son's daughters, by the saying of Him, on whom be blessing and peace ! "Make sisters, with daughters, residuaries."*

*The position of sisters when there are brothers. but not daughters or son's daughters, will be understood from what has been laid down earlier as to daughters when there are sons also (see p. 18). When there are sisters and daughters or sons' daughters, it is seen, from the text in this place, and from an illustration in the Shar., that the daughters, etc., take their shares. and the sisters take the residue ; thus, if there be daughter, son's daughter, and sister, daughter takes a half, son's daughter a sixth, sister the residue, see Shar. 72 ; Rums. M. L. I. 42, 44. In the first edition of the present work we stated erroneously that all took together as residuaries. If there are brothers as well as sisters and daughters, the brothers and sisters take the residue in the usual way, a double share to the male, see Rums. M. L. I. Chap. Xii, Ex, 6, taken from the Law Officers' opinion, in Ali Buksh Khan v. Kacem Beebee, 1 Macnaghten's Reports, 83,84. If there are C. brothers instead of

Sisters by the same father only are like sisters by the same father and mother, and may be in seven cases half goes to one, and two-thirds to two or more on failure of sisters by the same father and mother ; and with one sister by the same father and mother ; they have a sixth, as the complement of two-thirds ; but they have no inheritance with two sisters by the same father and mother,* unless there be with them a brother by the same father, who makes them residuaries ; and then the residue is *distributed* among them *by the sacred rule* "to the male what is equal to the share of two females." The sixth case is, where they are residuaries with daughters or with son's daughters, as we have before stated *it*.†

Brothers and sisters by the same father and mother, and by the same father only, are all excluded by the son brothers, they take nothing (see *pp. 24, 25)*; so also C. brother' s sons, see Ali, P. L.M., 51, citing 6 Fat.-i-AL., 629 : but this would follow *a fortiori*. See also Ali, P. L. M., 120, citing Durr-ul-Mukhtar 886, C. brothers and sisters excluded by sister and daughter or son's daughter. A female who thus instead of being excluded, becomes a residuary by reason of the existence of a particular female more nearly related to the deceased, is called a residuary "with" another (*see p.* 25).

*If there are several sisters, by the same father and the mother, as we have seen (*see. p.* 20*)*, they take two-thirds, and we see here that the sisters' portion is then exhausted: but, if there be only one, she takes only a half (*ibid)*, and we see here that one-sixth, the difference between one half and two-thirds, goes to the sisters by the same father only. For analogous case of daughter and sons, daughters. see *p. 18*.

†We see here, that, in the absence of sisters by the same father and mother, the rules as to sisters by the same father are the same (*mutati mutandis)* as those respecting sisters by the same father and mother (see *p.* 20). As to sisters (and brothers) by the same mother only, see.*p.*16.

and the son's son in how low a degree soever, and by the father *also*, as it is agreed *among the learned*, and even by the grandfather according to Abu Hanifah, on whom be the mercy of Almighty God !* and those of the half blood† are also excluded by the brothers of the whole blood.

The mother takes in three cases : a sixth with a child or a son's child, even in the lowest degree, or with two brothers and sisters or more, by whichever side they are related ; and a third of the whole on failure of those just mentioned ; and a third of the residue after the share of the husband or wife ; and this in two cases, either when there are the husband and both parents, or the wife and both parents : if there be a grandfather instead of a father, then the mother takes a third of the whole property, though not by the opinion of Abu Yusuf, on whom be God's mercy ! for he says that in this case also she has only a third of the residue. The grandmother has a sixth, whether she be by the father or by the mother, whether alone or with more, if they be true grandmothers‡ and equal in degree ; but they are all excluded by mother, and the paternal female ancestors also by the father ; and in like manner, by the grandfather, except the father's mother, even in the highest degree ;§ for she takes with the grandfather, since she is not *related* through him.

*For division of the property if they are not excluded by grandfather, *see p. 40 etc.*

† *i.e.* on father's side ; for rights of "mother's children" see *pp.* 16. 17.

‡ For definition of true grandmother, see p 15.

§ *e.g.*, father's father's mother is excluded by father's father, through whom she *is*, but not by father's father's father through whom she *is not*, related to the deceased.

The nearest grandmother, *or female ancestor,* on either side, excludes the more distant grandmother, on whichever side she be ; whether the nearer grandmother be entitled to a share of the inheritance, or be herself excluded. When a grandmother has but one relation, as the father's mother's mother; and another has two such relations, or more, as the mother's mother, who is also the father's father's mother, according to this table.

then a sixth is divided between them, according to Abu Yusuf, in moieties, respect being had to their persons ; but, according to Muhammed (on whom be God's mercy !) in thirds, respect being had to the sides.

ON RESIDUARIES

Residuaries by relation* *to the deceased* are three : the residuary in his own right, the residuary in another's right, and the residuary together with another.† Now

* For general list of residuaries "by relation," see Appendix A.

†It will be seen that the persons here called residuaries in their own right are males related entirely through males. These, except father and true grandfather, can never be sharers. Instances of the other two sorts of residuaries by relation (females who become residuaries) will be found above (see p. 18 etc.). An enumeration of male residuaries, and a full statement of the conditions under which, the father, true grandfather, and particular females may become residuaries, will be found in Rums. M. L.I., Chap. iv.

the residuary in his own right is every male, in whose line of relation to the deceased no female enters; and of this sort there are four classes ;* the offspring of the deceased, and this root ; and the offspring of his father and of his nearest grandfather, a preference being given, I mean a preference in the right of inheritance, according to proximity of degree. The offspring of the deceased are his sons *first*; then their sons, in how low a degree soever : then *comes* his root, or his father ; then his paternal grandfather, and their paternal grandfathers, how high soever ; then the offspring of his father, or his brothers ; † then their sons, how low soever ; and then the offspring of his grandfather, or his uncles : then their sons, how low soever. Then the strength of consanguinity prevails : I mean, he, who has two relations is preferable to him, who has only one relation, whether it be male or female, according to the saying of Him, on whom be peace ! "Surely, kinsmen by the same father and mother shall inherit before kinsmen by the same father only :" thus a brother by the same father and mother is preferred to a brother by the father only, and

* These four classes are analogous with the four classes of d. k., except in one respect, namely, that the fourth class of residuaries includes uncles *and* descendants of uncles : while that of d.k. includes uncles and aunts, but not their descendants (see p. 46). Observe that the four classes do not exhaust the residuaries, who consist of "every male in whose line, etc." (see definition in the text), and therefore include deseendants of *remoter* true grandfather, *e.g.*, paternal uncles of father and true grandfather and their male descendants through males (see p. 25).

† For special case in Minh. at-tal. (see p, 17, note).

a sister by the same father and mother, if she become a residuary with the daughter, is preferred to a brother by the father only ; and the son of a brother by the same father and mother is preferred to the son of a brother by the same father only ; and the rule is the same in regard to the paternal uncles of the deceased ; and, after them, to the paternal uncles of his father, and, after them, to the paternal uncles of his grandfather.

The residuaries in another's right are four females ; namely, those whose shares are half and two-thirds, and who become residuaries in right of their brothers, as we have before mentioned in their different cases ;* but she, who has no share among females, and whose brother is the heir, doth not become a residuary in his right ; as in the case of a paternal uncle and a paternal aunt.

As to residuaries together with others : such is every female who becomes a residuary with another female ; as a sister with a daughter, as we have mentioned before.† The last residuary is the master of a freedom,‡ and then his residuary heirs, in the order before stated ; according to the saying of Him, on whom be blessing and peace ! "the master bears a relation like that of consanguinity ;" but females have nothing among the heirs of a manumittor, according to the saying of Him, on whom be blessing and peace ! "Women have nothing from their relation to freedmen, except when they have themselves manumitted a slave ; or their freedman has manumitted one, or they have sold a manumission to a slave, or their vendee has

* See *p.* 18, etc.

† See *p.* 20, etc.

‡ A residuary "for special cause" (see p. 13).

sold it to his slave, or they have promised manumission after their death, or their promisee has promised it after his death, or unless their freedman or freedman's freedman draw a relation to *them.*''*

If the freedman leave the father and son of his manumittor, then a sixth of the right over the property of the freedman vests in the father, and the residue in the son, according to Abu Yusuf ; but, according to both Abu Hanifah and Muhammed, the whole right vests in the son ;† and, if a son and a grandfather or the manumittor be left, the whole right over‡ the freedman goes to the son, as all the learned agree. When a man possesses as his slave a kinsman in a prohibited degree, he manumits him, and his right vests in him ; as if there be three daughters, the youngest of whom has twenty *dinars*, and the eldest thirty ; and they two buy their father for fifty *dinars* ; and afterwards their father die leaving some property ; then two-thirds of it are divided in thirds among them, as their legal shares, and the residue goes in fifths to the two who bought their father ; three-fifths to the eldest and two-fifths to the youngest ; which may be settled by dividing the whole into forty five parts.§

* For meaning of this expression, and for other explanations respecting inheritance by manumission, see Shar. 76-80 ; Rums. M.L.I. 164-173.

† See also Ali P. L.M.57, citing 3 Hedaya, book xxiii.

‡ It seems clear that this should be *over the property of.*

§ For working of this and another example on inheritance by manumission (*willa*), see Rums, M.L.I. 212, 213.

ON EXCLUSION

Exclusion is of two sorts : I. *Imperfect.* or an exclusion from one share, and an admission to another ; and this takes place in respect of five persons, the husband or wife, the mother, the son's daughter, and the sister by the same father ;* and an explanation of it has preceded. 2. *Perfect* exclusion : there are two sets of persons having a claim to the inheritance : one of which sets is not excluded entirely in any case; and they are six persons, the son, the father, the husband, the daughter, the mother, and the wife ; but the other set inherit in one case and in another case are excluded.† This is grounded on two principles ; one of which is, that "whoever is related to the deceased through any person, shall not inherit, while that person is living ;" as a son's son, with the son ;‡ except the mother's children for they inherit with her ; since she has no title to the whole inheritance : the second *principle* is " that the nearest *of blood* must take," and who the nearest is, we have explained *in the chapter* on residuaries. A person

*These instances, which are scattered in the Sirâjiyyah. (see *pp.* 17, 18, etc), are given in a collective form in the "table of sharers," Rums. M. L. I., 17

†The instances, which are scattered in the Sirâjiyyah, (see *pp.* 16. etc.) are collected in Rums. M. L. I., Chap. x. (see especially the "table of exclusion," *p.* 130). The persons *not* liable may be briefly described as *parents, children, husband, and wife.* The principal examples of exclusion are given in 6 Fat-i-Al., 630 (see Ali P.L.M., 104, note).

‡That is, his own father ; but a son's son is excluded equally by any other son. See the rule, "the nearest of blood must take," which is given immediately below.

incapable of inheriting doth not exclude any one, *at least* in our opinion ; but according to Ibnu Masúúd (may God be gracious to him !) he excludes imperfectly ; as an infidel, a murderer, and a slave. A person excluded may, as all *the learned* agree, exclude *others* ; as, *if there be* two brothers or sisters or more, on whichever side they are, they do not inherit with the father *of the deceased*, yet they drive the mother from a third to a sixth.*

ON THE DIVISORS† OF SHARES

Know, that the six shares‡ mentioned in the book of Almighty God are of two sorts :§ of the first are a moiety, a fourth, and an eighth ; and of the second sort are two-thirds, a third, and a sixth, as the fractions are halved and doubled. Now, when any of these shares occur in cases singly, the divisor for each share is that number which gives it its name, ‖ (except half, which is from two) as a fourth denominated from four, an eighth from eight, and a third from three : when they occur by two or three, and are of the same sort, then each integral number is the

*See *p.* 22.

†These are often called "roots" see "root of the case," *p.* 33 ; Mr. Van den Berg calls them (in French) *bases numerales* (see 2 Minh attâl.. 250).

‡Already enumerated at *p.* 14.

§The "first sort," it is here seen, arise when the estate is divided only by two, or powers of two ; the "second sort," when the factor three enters into the division.

‖ *e.g.*, if the only shares are a true grandmother and an U. brother, each of whom takes one-sixth, the estate is divided by six, the number which "gives its name" to the share one-sixth.

proper divisor to produce its fraction, and also to produce the double of that fraction, and the double of that, as six produces a sixth, and likewise a third, and two-thirds; but, when half, *which is* from the first sort, is mixed with all of the second sort or with some of them, then *the division of the estate must be* by six; when a fourth is mixed with all of the second *sort* or with some of them, then the division must be into twelve; and when an eight is mixed with all of the second sort, or with some of them, then it must be into four and twenty parts.

ON THE INCREASE.

Aul, or *increase*, is, when some fraction remains above the *regular* divisor, or when the divisor is too small to admit one share. Know, that the whole number of

*Thus, of there be a daughter, who takes one-half, and a wife, who (as there is a child) takes one-eighth, the estate must be divided by eight; if there be several daughters, who take two-thirds and a mother who (as there are children) takes one-sixth, it must be divided by six; if there be several daughters, who take two thirds, and a husband, who (as there are children) takes one-fourth, it must be divided by twelve; if there be several daughters, who take two-thirds, and a wife, who (as there are children) takes one-eighth, it must be divided by twenty-four. It will be seen that these are merely rules for asscertaining, without calculation, the l. c. d. of any set of shares that may occur together. It will be observed that the residue is not mentioned in this chapter; the residue in fact, must always be a fraction with the same denominator as the shares, *i.e.*, with the root for its denominator; for, if x be the root, and $\frac{a}{x}, \frac{b}{x}$ the shares, it is easily seen that:—Residue $= 1 - \frac{a+b}{x} = \frac{x-(a+}{x}$

divisors is seven, four of which have no increase, namely, two, three, four, and eight; and three of them have an increase. The *divisor*, six, is therefore, increased by the áúl to ten, either by odd, or by numbers; twelve is raised to seventeen by odd, not by even numbers; and twenty-four is raised to twenty-seven by one increase only as in the case, called *Mimberiyya*, (or a case answered by Ali when he was in the pulpit) which was this, "A *man left* a wife, two daughters, and both his parents." After this there can be no increase, except according to Ibnu Masúúd, (may God be gracious to him!) for, in his opinion the divisor twenty-four may be raised to thirty-one; as *if a man leave* a wife, his mother, two sisters by the same parents, two sisters by the same mother only, and a son rendered incapable of inheriting.*

The process of the "increase" is not an augmentation of the shares, as the name might seem to suggest but a proportionate diminution of the shares when they cannot be paid in full, in consequence of the fractions, when added together, being greater than unity or the whole; e.g. let there be husband, father, mother, and daughter, who should respectively take one-fourth, one-sixth, one sixth, and one-half The root is twelve and the shares would be respectively three-twelfths, two-twelfths, two twelfths, and six-twelfths, so that they would make in all thirteen-twelfths. These hares, therefore, cannot be paid in full; but by the rule of the increase the root is increased to thirteen, and the claimants will take respectively three-thirteenths, two thirteenth, two-thirteenths, and six-thirteenths, so that the estate will be exactly dividad among the sharers in the required ratio of three two, two, and six. The rule may be simply stated thus:—when the sum of the portions is greater than the root, the root must be increased so as to be equal to that sum. Examples of the increase will be found in Rums. M.L.I., 111. 135. etc.

ON THE EQUALITY, PROPORTION, AGREEMENT, AND DIFFERENCE OF TWO NUMBERS.

The temathul of two numbers in* the equality of one to the other; the *tedakhul* is, when the smaller of two numbers exactly measures the larger, or exhausts it; or we call it *tedakhul*, when the larger of the two numbers is divided exactly by the smaller; or we may define it thus, when the larger exceeds the smaller by one number or more equal to it, or equal to the larger; † or it is, when the smaller is an aliquot part of the larger, as three of nine. The *tawafuk*, or agreement of two numbers is, where the smallar does not exactly measure the larger, but a third number measure them both, as eight and twenty, each of which is measured by four, and they agree in a fourth; ‡ since the number measuring them is the denominator of a fraction common to both. The *tabayun* of two numbers is, when no third number whatever measures the two discordant numbers, as nine and ten. Now the way of knowing the agreement or dis-

* This is clearly a misprint for *is*.

† Apparently the author of the Sirâjiyyah did not know any special rule of division, but ascertained the *tedakhul* of numbers by subtraction. It will be seen that, in his rule for finding the agreement (*i.e.*, the g.c.m.) of two numbers, he makes use of successive subtraction instead of division (see *p.*32 and Appendix A2).

‡ We shall have to use this expression frequently, and it may be as well to mention, that when any two numbers are said to agree in a fourth, a third, etc. (or in four, three, etc.), the meaning is that the four, three, etc., is the g.c.m. Thus, 'thirty-six and twenty-four agree in a twelfth,'' or ''in twelve,'' would mean that twelve is the g.c.m. of thirty-six and twenty-four.

agreement between two different quantities is, that the greater be diminished by the smaller quantity on both sides, once or oftener, until they agree in one point; and if they agree in unit only, there is no numerical agreement between them*; but, if they agree in any number, then they are (*said to be*) *mutawafik* in a fraction, of which that number is the denominator; if two, in half; if three, in a third; if four, in a quarter; and so on, as far as ten, and above ten, they agree in a fraction; I mean, if the number be eleven, the fraction of eleven, and, if it be fifteen, by the fraction of fifteen. Pay attention to the *rule*.*

ON ARRANGEMENT†

In arranging cases there is need of seven principles:

* See Appendix A2.

†The translator, as he informs us in his Preface, used "arrangement" in the place of an Arabic word for which he was unable to find an exact equivalent. There is indeed, no technical terms of European arithmetic which could be used singly to designate the process described as "arrangement." The meaning of the word, however, is not obscure. It will be remembered that rules for finding the root, or l.c.d of several shares, were given above (see *p*, 28). But at that early stage it was not supposed that there might be several claimants for one share, *e.g.*, five sisters taking two-thirds between them, two wives taking one-eighth between them, or the like; the rules, therefore, did not settle what the l.c.d. would be under such circumstances. The "principles of arrangement" take up the calculation where those rules left it off, and teach us to find what number we must multiply into the root in order to ascertain the *ultimate* l.c.d. The word "arrangement" designates either this ultimate l.c.d., or the process by which it is found. In a case of increase (see *p*. 29) the increased root must, of course, be multiplied instead of the original root.

three, between the shares and the persons, and four between persons and persons. Of the three *principles* the first* is, that, if the portions of all the classes be divided among them without a fraction, there is no need of multiplication, as *if a man leave* both parents and two daughters. The second† is, that, if the portions of one class be fractional, yet there be an agreement between their portions and their persons, then the measure of the number of persons, whose shares are broken, must be multiplied by the root of the case, and its increase, it‡ it be an increased case, as *if man leave* both parents and ten daughters, or *a woman leave* a husband, both parents, and six daughters. The third§ *principle* is, that, if their portions leave a fraction, and there be no agreement between those portions and the persons, then the whole number of the persons, whose shares are broken, must be multiplied into the root of the case, as *if a woman leave* her husband and five sisters by the same father and mother. Of the four *other principles* the first ‖ is, that, when there is a fractional division between two classes or more, but an equality between the numbers of the persons, then the rule is, that one of the numbers be multiplied into the root of the case ; as if *there be* six daughters, and three grandmothers, and three paternal uncles. The second is, when some of the numbers equally measure the others ; then the rule is, that the greater number be multiplied into the root of the case ; as, *if a man leave* four wives and three grandmothers and

* See Appendix B.
† See Appendix C.
‡ This is clearly a misprint for *if*.
§ See Appendix D.
‖ See Appendix E.
¶ See Appendix F.

twelve paternal uncles. The third* is, when some of the numbers are *mutawafik*, or composit, with others; then the rule is, that the measure of the first of the numbers be multiplied into the whole of the second, and the product into the measure of the third, if the product of† the third be *mutawafik*, or, if not, into the whole of the third, and then into the fourth, and so on, in the same manner; after which the product must be multiplied into the root of the case : as, *if a man leave* four wives. eighteen daughters, fifteen female ancestors and six paternal uncles. The fourth‡ *principle* is, when the numbers are *mutabayan*, or not agreeing one with another ; and then the rule is, that the first of the numbers be multiplied into the whole of the second, and the product multiplied by the whole of the third, and that product into the whole of the fourth, and the last product into the root of the case ; as *if a man leave* two wives, six female ancestors, ten daughters, and seven paternal uncles.§

SECTION

When thou desirest to know the share of each class by arrangement, ‖ multiply what each class has from the root

* See Appendix G.

† This is evidently a misprint for "and, " as the word "of" is unmeaning here, and the working out of the example shows that it is the agreement *between the product and the next number* that we have to ascertain (see Appendix G.).

‡ See Appendix H.

§ See Appendix I as to considering the portions " from the root of the case."

‖ We have already been furnished, just above, with rules for

of the case by what thou hast already multiplied into the root of the case, and the product is the share of that class ; and, if thou desirest to know the share of each individual in that class by arrangement,* divide what each class has from the principle of the case by the number of the persons in it,† then multiply the quotient into the multiplicand, and the product *will be* the share of each individual in that class. Another method is, to divide the multiplied number by whichever class thou thinkest proper, then to multiply the quotient into the share of that set, by which thou hast divided the multiplied number, and the product *will be* the share of each individual in that set. Another method is by the way of proportion, which is the clearest; and it is, that a proportion be ascertained for the share of each class from the root of the case to the number of persons one by one, and that, according to such proportion from the multiplied *number*, a share be given to each individual of that class.

finding the arrangement, or ultimate l. c. d. The Sirájiyyah now gives a rule for finding the number of parts that each class will take out of the entire number into which the estate is divided. In European arithmetical phraseology, having found the l. c. d., we have now to find the numerators. An example of this rule is worked out, Appendix J.

*Having found the portion of each class, we have now to divide that portion among the several individuals. In other words, having found the numerator for each class, we have now to find the numerator for each individual. For an example, see Appendix K.

†When this has been done, we have the desired result ; the words "then multiply. . . . . in that class" would therefore appear to be superfluous. Possibly there may have been some mistake on the part of the translator. If "root" were substituted for "principle," the rule would be correct as it stands.

ON THE DIVISION OF THE PROPERTY LEFT AMONG HEIRS AND AMONG CREDITORS

If there be a disagreement between the property left and the *number arising from the* arrangement, then multiply the portion of each heir, according to that arrangement, into the aggregate of the property, and divide the product by the number of the arrangement, but, when thers is an agreement between the arrangement and the property left, then multiply the portion of each heir, according to the arrangement into the measure of the property, and divide the product by the measure of the *number arising from the* arrangement : the quotient is the portion of that heir in both methods. This *rule* is in order to know the portion of each individual among the heirs : but, in order to know the portion of each class of them, multiply what each class has, according to the root of the case, into the measure of the property left, then divide the product by the measure of the case, if there be an agreement between the property left and the case; but, if there be a disagreement between them, then multiply into the whole of the property left, and divide the product by the whole *number arising from the* verification* of the case ! and the quotient *will be* the portion of that class in both methods. Now, as to the payment of debts, the debts of all the creditors stand in the place of the arranging number.†

*The word "verification," as we learn from Sir William Jones's preface, *p*, vi., is used by him in the same sense as "arrangement."

†See Appendix L.

ON SUBTRACTION

When any one agrees to take a part of the property left, subtract his share from *the number arising by the* proof, and divide remainder of the property by the portions of those who remain ; as, *if a woman leave* her husband, her mother, and a paternal uncle. Now *suppose that* the husband agrees to take what was in his power of his bridal gift to the wife; this is deducted from among the heirs : then what remains is divided between the mother and the uncle in thirds, according to their legal shares ; and thus there will be two parts for the mother, and one for the uncle.*

ON THE RETURN†

The return is the converse of the increase ; and it *takes place* in what remains above the shares of those entitled to them, when there is no legal claimant of it : this surplus is returned to the sharers according to their rights,‡ except the husband or the wife ;§ and this is the

*See Appendix M.

†It has been observed that there cannot be a return to more than three classes (*i.e.*, sharers or sets of sharers) out of the same estate ; see Ali. P. L. M., 116, citing the Durr-ul-Muktâr, 868, 869. It may, in fact, easily be ascertained by inspection that any combination of more than three would exhaust the estate.

‡ In other words, if there are no residuaries, the sharers (except husband or wife) divide the residue among them *in proportion to their shares*, and the d.k. get nothing. This chapter gives rules for dividing the property in due proportion, See Appendix N.

§Except slso father and true grandfather, who may be residuaries as well as sharers, *see pp.* 15, 16.

opinion of all the *Prophet's* companions, as Ali and his followers, may God be gracious to them ! And our masters (to whom God be merciful !) have assented to it : Zaid, the son of Thábit says,* that the surplus doth not revert, but *goes* to the public treasury ; and to this opinion have assented Urwah and Alzuhri and Málic and Alsháfi, † may God be merciful to them !

Now the cases in this head are *in* four divisions : the first of them is, when there is in the case but one sort of kinsmen, to whom a return must be made, and none of those who are not entitled to a return : then settle the case according to the number of persons ; as, when the deceased has left two daughters, or two sisters, or two famale ancestors ; settle it, therefore, by two. The second *is*, when there are joined in the case two or three sorts of those, to whom a return must be made, without any of those, to whom there is no return : then settle the case according to their shares ; I mean by two, if there be two-sixths in the case ; or by three, when there are a third and a sixth in it ; or by four, when there are a moiety and a sixth in it ; or by five, when there are in it two-thirds and a sixth, or half and two-sixth, or half and a third. The third *is*, when in the first case, there is *any one* to whom no return can be made : then give the share of him or her, to whom

*A comma is, apparently, wanted before "says."

†Not so as to followers of Alshâfii *now*, for "les héritiers indiqués dans le Coran, â l' éxception de l'époux et do l'épouse, peuvent, aprés avoir recu leurs respectives, et â défaut d'autres héritiers légitimaires, exiger que le reste de l a succession soit aussi partaõe proportionellement entre eux," 2 Minh. at-tâl, '225, 226.

there is no return, according to the lowest *denominator*,* and if the residue exactly quadrate with the number of persons, who are entitled to a return, *it is* well ; as, *if there be* a husband and three daughters ; if they do not agree, then multiply the measure *of the number* of the persons, if there be an agreement between the number of persons and the residue, into the denominator of the shares of those, to whom no return is to be made : as *if there be* a husband, and six daughters ; if not, multiply the wholer number of the persons into the denominator of the share of those, to whom there is no return; and the product will set the case right. The fourth is, when in the second case, there are any to whom no return is made : then divide what remains from the denominator of the share of him or them,‡ who have no return, by the case of those to whom a return must be made, and, if the remainder quadrate, *it is well*; and this *is* in one form; that is, when a fourth *goes* to the wives and the residue is *distributed* in thirds among those entitled to a return ; as *if there be* a wife, and a grandmother, and two sisters by the mother's side : but, if it do not quadrate, then multiply the whole case of those, who are entitled to a return, into the denominator of the share of him or her, who is not entitled to it ; and the product will be the denominator of the shares of both classes ; as *if there be*

*Perhaps this should be *denomination*; what is meant (as will be seen from the working in Appendix N) is the denominator of the *primary* share of the person who takes no return.

† There may, of course, be several wives, though there can be only one husband.

four wives, and nine daughters, and six female ancestors ; then multiply the shares of those, to whom no return must be made, into the case of those, who are entitled to a return, and the shares of those, to whom a return is to be made, into what remains of the denominator of the share of those, who are not entitled to a return. If there be a fraction in some, adjust the case by the before mentioned principles.*

ON THE DIVISION OF THE PATERNAL GRANDFATHER†

Abubecr the Just, (on whom be the grace of God !) and those, who followed him, among the companions *of the Prophet*, say, "The brethren of the whole blood and the brethren by the father's side inherit not with the grandfather:" This is also the decision of Abu Hanifa (on whom be God's mercy !) and the judgments are given conformably to it. Zaid, the son of Thábit, indeed, asserts, that they *do* inherit with the grandfather, and of this opinion are both *Abu Yusuf and Muhammed*, as well as Málic and Alsháfii.‡ According to Zaid, the son of Thábit (on

* *i.e.*, the principles of arrangement, see last part of Appendix N.

†The chapter, though very curious, has no importance except on the supposition that the true grandfather does not exclude whole and C. brothers and sisters. It would seem that, in India, the doctrine of such exclusion prevails, see Tag, Lect., 1873, 97, citing 6 Fat.-i-Al., 625 ; Ali., P. L. M., 120, citing the Dur.-ul-Mukhtar, 866. Under these circumstances we do not deal with the subject of this chapter in the present work, but it is fully treated in Rum. M. L. I., 29-36 ; see also same work, 130, note.

‡ See 2 Minh. at-tál.. 234, where it is stated that whole and C. brothers *and sisters* inherit with true grandfather, and *ibid.* 239-243, where the curious process of giving "the best" ("le plus avantageux") is described and illustrated by examples.

whom be God's mercy !) the grandfather, with brother or sisters of the whole blood and by the father's side, takes the best in two cases, from the *mukasamah*, or *division*, and from a third of the whole estate. The meaning of *mukasamah* is that the grandfather is placed in the division as one of the brethren, and brethren of the half blood enter into the division with those of the whole blood to the prejudice of the grandfather ; but, when the grandfather has received his allotment, then the half blood are removed from the rest, *as if* disinherited, and receive nothing ; and the residue goes to the brethren of the whole blood ; except when, among those of the whole blood there is a single sister, who receives her legal share, I mean the whole after the grandfather's allotment ; then if anything remains, *it goes* to the half blood ; if not, they have nothing ; and this *is the case* when *a man leaves* a grandfather, a sister by the same father and mother, and two sisters by the same father only : *in this case* there remains to those sisters a tenth of the estate, and the correct denominator *is* twenty ; but, if there be, in the preceding case, one sister by the same father only, nothing remains for her ; and if, one, entitled to a legal share, be mixed with them, then, after he has receivcd his share, the grandfather has the best in three arrangements ; either the division, when *a woman leaves* her husband, a grandfather, and a brother ; or a third of the residue *is given*, when a man leaves a grandfather, a grandmother, and two brothers, and a sister by the same father and mother. Or a sixth of the whole estate *is given*, when a man leaves a grandfather and a grandmother, and two

brothers ; and, when a third of the residue is better from * the grandfather, and the residue has not a complete third, multiply the denominator of the third into the root of the case. If a woman leave a grandfather, her husband, a daughter, her mother and a sister by the same father and mother, or by the same father only, then a sixth is best for the grandfather, and the *root of the* case is raised to thirteen, and the sister has nothing. Know, that Zaid, the son of Thabit (on whom be God's grace !) has not placed the sister by the same father and mother, or by the same father, as entitled to a share with the grandfather† except in the case named *acdariyyah*, and that is, the husband, the mother, a grandfather, and a sister by the same father and mother, or by the same father only ; *in which case* the husband *ought to have* a moiety ; the mother, a third ; the grandfather annexes his share to that of the sister, and, a division is made between them *by the rule* "a male has the portion of two females ;" *and this is*, because the division is best for the grandfather. The root is *regularly* six, but is increased to nine ; and a correct distribution is made by twenty-seven. The case is called *acdariyyah*,‡ because it occurred on *the death of*

*Probably this should be *for*.

† For conjectural explanation of this statement, which, at first sight, seems inconsistent with what has gone before, see Rums M.L. I., 32, 33.

‡ The case of acdariyyah ("al-akdarijah") is given briefly in Minh. at-täl, 242. It is more fully worked out in Rums. M. L. L. 32.

a woman belonging to the tribe of Acdar. If, instead of the sister, there be a brother or two sisters, there is no increase, nor *is that case* an *acdariyyah*.

ON SUCCESSION TO VESTED INTERESTS

If some of the shares become vested inheritances before the distribution, as *if a woman leave* her husband, a daughter,* and her mother, and the husband die before the estate can be distributed, leaving a wife and both his parents, *if* then the daughter die leaving two sons, a daughter, and a *maternal* grandmother, and then the grandmother† die leaving her husband and two brothers, the principle in this *event* is, that the case of the first deceased be arranged, and that the allotment of each heir be *considered* as delivered according to that arrangement; that, next, the case of the second deceased be arranged, and that a comparison be made between what was in his hands, *or vested in interest*, from the first arrangement, and between the second arrangement, in three situations; and if, on account of equality, what *is* in his hands from the first arrangement quadrate with‡ the second arrangement, then there is no need of multiplication; but if it be not right, then see whether there is an agreement between the two, multiply the

*By a former husband see Shar. 91; also Appendix O.

† *i.e.*, the grandmother of the daughter; in other words, the mother of *proposita*, see Shar. 92; also Appendix O.

‡ i. e., be equal to; the working out of the example shows that this is the meaning, see Appendix O.

measure of the second arrangement into the whole of the first arrangement ; and, if there be a disagreement between them, then multiply the whole of the second arrangement into the whole of the first arrangement, and the product *will be* the denominator of both cases. The allotments of the heirs of the first deceased must be multiplied into the former multiplicand, I mean into the second arrangement or into its measure ; and the allotments of the heirs of the second deceased must be multiplied into whole of what *was* in his hands ; or into its measure ; and if a third or fourth die, put the second product in the place of first arrangement, and the third case in the place of the second, in working ; *and* thus in *the case of* a fourth and a fifth, and so on to infinity.*

ON DISTANT KINDRED†

A distant kinsman *is* every relation, who is neither a

*" Vested inheritances, " in the language of the Sirajiyyah, mean portions of the estate which accrued by the death of *propositus*, but have not been separated from the rest during the lifetime of the persons entitled to such portions. When the division is at length effected, some of the surviving heirs of *propositus* may be heirs also of the persons who have died, and some may not. This chapter gives rules for effecting the division of the estate among all claimants under such circumstances. For examples, see Appendix O ; Rums. M.L.I., 120,137,140,144-148.

† For examples on d.k. see Appendix P,P1 ; the same examples and some others are worked out in Tag. Lect., 1873,151-173 ; Bail. M.L.L., 92-109 ; Rums, M.L.I.. 92-109.

sharer nor a residuary.* The generality of the *Prophet's* companions repeat a tradition concerning the inheritance of distant kinsmen ; and, according to this our masters and their followers (may God be merciful to them !) have decided; but Zaid, the son of Thabit (on whom be God's grace !) says : "There is no inheritance for the distant kindred, but the property *undisposed of* is placed in the public treasury" ; and with him agree Malic and Alshafii,† on whom be God's mercy ! Now these distant kindred *are* of four classes; the first class is descended from the deceased ; and they are the daughter's children, and the children of the son's daughter's.‡ The second sort *are* they, from whom the deceased descend ; and they are the excluded grandfathers and the excluded grandmothers.§ The third sort are descended from the parents of the deceased ; and they *are* the sisters' children, and

*This definition shows that "distant kindred" include all relations, whether near or remote, who are not sharers or residuaries. It is necessary to call attention to this point, as some English writers have overlooked the definition, and have thus imagined that only the "four classes" are included in the d.k. The reader should observe that, at the end of the classification, the author of the Sirajiyyah add the words "these, *and all who are related to the deceased through them*, are among the distant kindred," see p. 46.

† Not so as to followers of Alshāfiî *now*, for :— "Méme l'état est exclu par les cognats. si le défunt n'a laissé sucun héritier legitimaire. On entend par 'cognats' tous les parents et parents, exception faite de ceux que nous venons de mentionner comme heritiers légitimaire," 2 Minh. at-tâl., 226 ; the " hèritiers légitimaires" are the sharers and residuaries, *ibid : 224, 225*.

‡ And their descendants, see illustrations, p. 48, etc.

§ i.e., false grandfathers and false grandmothers, for true grandfathers are sharers and residuaries, and true grandmothers are sharer, see pp. 15, 16, 22.

the brother's daughters, and the sons of brothers by the same mother only.* The fourth sort are descended from the two grandfathers and two grandmothers of the deceased ; and they are paternal aunts, and uncles by the same mother *only*, and maternal uncles and aunts.† These, and all who are related to the deceased through them, are among the distant kindred. Abu Sulaiman reports from Muhammed the son of Alhasan, *who reported* from Abu Hanifah (on whom be God's mercy) that the second sort are the nearest of the *four* sorts, how high soever they ascend ; then the first, how low soever they descend ; then the third, how low soever : and lastly, the fourth, how distant soever *their degree* : but Abu Yusuf and Alhasan, the son of Ziyad, report from Abu Hanifah, (on whom be the mercy of God !) that the nearest of the *four* sorts is the first, then the second, then the third, then the fourth, like the order of the residuaries ; and this is taken *as a rule* for decision. According to the both *Abu Yusuf and Muhammed*, the third sort has a preference over the maternal grandfather.

* And their descendants, see illustrations, p.52, etc.; also brothers' sons' daughters, and the like, *ibid.*

† The general analogy of the four classes of d.k. with the four classes of residuaries, and a particular exception to that analogy, have been pointed out earlier ; see p.24, note. Observe that the classes of d.k., like those of residuaries, are not exhaustive, as the d.k.. include all relations who are not sharers or residuaries (pp. 44, 45) ; see also "These, and all who are" etc. (*next sentence*).

ON THE FIRST CLASS

The best entitled of them to the succession is the nearest of them in degree to the deceased ; as the daughter's daughter, who is preferred to the daughter of the son's daughter ; and, if *the claimants* are equal in degree, then the child of an heir is preferred to the child of a distant relation ;* as the daughter of a son's daughter is preferred to the son of a daughter's daughter ; but, if their degrees be equal, and there be not among them the child of an heir, or if all of them be the children of heirs, then, according to Abu Yusuf (may God be merciful to him !) and Alhasan, son of Ziyad, the persons of the branches are considered, and the property is distributed among them equally, whether the condition of the roots, as male or female, agree or disagree, but Muhammad (on whom be God's mercy !) considers the persons of the branches, if the sex of the roots agree, *in which respect* he concurs with the other two ; and he considers the persons of the roots, if their sexes be different, and, he gives to the branches the inheritance of the roots, in opposition to the two *lawyers.* For instance, when *a man* leaves a daughter's son, and a daughter's daughter, *then,* according to Abu Yusuf and Alhasan, the property is distributed between them, by *the rule* " the male has the portion of two females, " their persons being considered ; and, according to Muhammed,

*The reader should observe that the word "heir" is confined to shares and residuaries, in other words, does not include the d.k. This may be gathered from many parts of the Sirajiyyah, but it is especially noticeable here, for a distinction is drawn between children of "heirs" and children of "distant relations ;" i.e., as shown by the illustrations, children of the d.k.

in the same manner ; because the sexes of the roots agree : and, if *a man* leave the daughter of a daughter's son, and the son of a daughter's daughter, *then*, according to the two *first mentioned lawyers*, the property *is divided* in thirds between the branches, by considering the persons, two-thirds of it *being given* to the male, and one-third to the female ; but according to Muhammed (on whom be God's mercy !) the property *is divided* between the roots, I mean *those* in the second rank, in thirds, two-thirds *going* to the daughter of the daughter's son, *namely*, the allotment of her father, and one-third of it to the son of the daughter's daughter, *namely*, the share of his mother. * Thus, according to Muhammed (to whom God be merciful !) when the children of the daughters are different *in sex*, the property is divided according to the first rank *that* differs among the roots ; then the males are arranged in one class, and the females in another class, after the division, and what goes to the males is collected and distributed according to the highest difference, that occurs among their children, and, in the same manner, what goes to the females ; and thus the operation is continued to the end according to this scheme :†

S	S	S	D	D	D	D	D	D	D	D	D
D	D	D	D	D	D	D	D	D	D	D	D
S	D	D	S	S	S	D	D	D	D	D	D
D	D	D	S	D	D	S	S	S	D	D	D
D	S	D	D	D	D	S	D	D	S	D	D
D	D	D	D	D	S	D	D	S	D	S	D

*See Appendix P. †Worked out in Appendix PI.

Thus Muhammed (to whom God be merciful !) takes the sex from the root at the time of the distribution, and the number from the branches ; as, *if a man* leaves two sons of a daughter's daughter's daughter, and a daughter of a daughter's daughter's son, and two daughters of a daughter's son's daughter, in this form :*

THE DECEASED

Daughter	Daughter	Daughter
Son	Daughter	Daughter
Daughter	Son	Daughter
Two daughters	Daughter	Two sons

in this case, according to Abu Yusuf (on whom be God's mercy !) the property is divided among the branches in seven parts, by considering their persons ; but, according to Muhammed, (to whom God be merciful !) the property is distributed according to the highest difference *of sex*, I mean in the second rank, in sevenths by the number of branches in the roots ; and, according to him, four-sevenths of it *go* to the daughters of the daughter's son's daughter ; since that is the share of their grandfather, and three-sevenths of it, which are the allotment of the two daughters, are divided between their two children, I mean those in the third rank, in moieties ; one moiety to the daughter of the daughter's daughter's son, *which* is the share of her father, and the other moiety to the two sons of the daughter's daughter's daughter, *being* the share of their mother : the correct divisor of property is, in this case, twenty-eight. The opinion of Muhammed (on whom be God's mercy !) is the more generally received of the two traditions from Abu

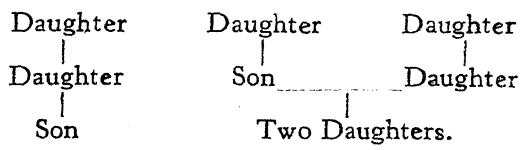
*Worked out, *ibid.*

Hanifah (to whom God be merciful!) in all decisions concerning the distant kindred; and this was the first opinion of Abu Yusuf; then he departed *from it*, and said that the roots were by no means to be considered.*

A SECTION

Our learned *lawyers* (on whom be the mercy of God!) consider the *different* sides in succession; except that Abu Yusuf (may God be merciful to him!) considers the sides in the persons of the branches, and Muhammed, (on whom be God's mercy!) considers the sides in the roots; as, when *a man* leaves two daughters of a daughter's daughter, who *are* also the two daughters of daughter's son, and the son of a daughter's daughter, according to this scheme.† *In this case*, according to

THE DECEASED



Abu Yusuf, the property *is divided* among them in thirds, and then the deceased is considered as if he had left our daughters and a son; two-thirds of it, therefore, go to the two daughters, and one-third to the son:

*Observe that, in the first class, the tests are applied in the following order:—1, Degree; 2, Child of heir or not.

†Worked out in Appendix P.

but, according to Muhammed (to whom God be merciful!) the estate *is divided* among them in twenty-eight parts, to the two daughters twenty-two shares (sixteen in right of their father and six shares in right of their mother) and to the son six shares in right of his mother.

ON THE SECOND CLASS

He among them, who is preferred in the succession, is the nearest of them to the deceased, on which side soever he stands; and, in the case of equality in the degrees of proximity, then he, who is related to the deceased through an heir,* is preferred by the opinion of Abu Suhail, *surnamed* Alferáidi, of Abu Fudail Alkhassáf, and of Ali, the son of Isai Albasri; but, no preference *is given* to him according to Abu Sulaiman Aljurjáni, and Abu Ali al Baihathi Albusti. If their degrees be equal, and there be none among them, who is related through an heir, or, if all of them be related through an heir, then, if the sex of those, through whom they are related, agree, and their relation be on the same side, the distribution is according to their persons, but if the sex of those, to† whom they are related, be different, the property is distributed according to the first rank

*Literally, every person of this class is related "through an heir," being related through father or mother; but the meaning is, of course, related through *an heir or heirs only, without any link of d. k., e.g.*, mother's mother's father, as distinguished from mother's father's father.

†This seems clearly a mistake for *through*

that differs in sex, as in the first class ; and, if their relation differ, then two-thirds *go* to those on the father's side, that *being* the share of the father, and one-third *goes* to those on the mother's side, that *being* the share of the mother : then what has been allotted to each set is distributed among them, as if their relation were the same.*

ON THE THIRD CLASS

The rule concerning them is the same with that concerning the first class ; I mean, *that* he *is* preferred in the succession, who is nearest to the deceased : and, if they be equal in relation, then the child of a residuary† *is* preferred to the child of a more distant kinsman ; as, *if a man leave* the daughter of a brother's son, and the son of a sister's daughter, both of them by *the same* father and mother, or by *the same* father, or one of them

*Th second class consists of those relations "from whom the deceased descend" (see *p.* 45); that is to say, ancestors of *propositus* except those who are sharers or residuaries. In other words, it consists of false grandfathers and false grandmothers. Observe that, in this class, the tests are applied in the following order :— 1, Degree ; 2, Relationship through heir or not ; 3, Paternal or maternal side.

†Observe that the words "child of a residuary" are used here, not "child of an heir," as at *p.* 47. The reason is that, in this class, the child of a sharer must always be nearer than the child of a d. k., so that they can never come into competition. This may easily be ascertained by inspection.

by the *same* father and mother, and the other by the *same* father *only*: *in this case* the whole estate *goes* to the daughter of the brother's son, because she is the child of a residuary; and, if it be by *the same* mother *only*, *distribution is made* between them *by the rule*, "A male has the share of two females," *and*, by the opinion of Abu Yusaf (to whom God be merciful !) in thirds, according to the persons, but, by that of Muhammed, (may God be merciful to him !) in moieties according to the roots; and, if they be equal in proximity, and there be no child of a residuary, among them, or *if* all of them be children of residuaries, or if some of them be children of residuaries, and some of them children of those entitled to shares, and their relation differ, then Abu Yusuf (to whom God be merciful !) considers the strongest *in consanguinity*; but Muhammed (may God be merciful to him !) divides the property among the brothers and sisters in moieties, considering as well the number of the branches, as the sides in the roots; and what has been allotted to each set is distributed among their branches, as in the first class: thus, *if a man leave* the daughter of the daughter of a sister by *the same* father and mother, she is preferred to the son of the daughter of a brother by the same father *only*, according to Abu Yusuf (to whom God be merciful !) by reason of the strength of relation; but, according to Muhammed, (may God be merciful to him !) the property is divided between them both in moieties by consideration of the roots. So, when *a man* leaves three daughters of different brothers, and three sons and three daughters of different sisters, *as* in this figure.*

*Worked out in Appendix Pl.

THE DECEASED.

Sister—Sister—Sister—Brother—Brother—Brother

by the same

Mother—Father—Father—Mother—Father—Father
and Mother *and* Mother

Son Son Son Daughter Daughter Daughter
Daughter Daughter Daughter.

In this case according to Abu Yusuf, the property is divided among the branches of the whole blood, then among the branches by the same father, then among the branches by the same mother, *according to the rule* "the male has the allotment of two females," in fourths, by considering the persons; but according to Muhammed (to whom God be merciful!) a third of the estate is divided equally among the branches by the same mother, in thirds, by considering the equality of their roots in the division of the parents, and the remainder among the branches of the whole blood in moieties, by considering in the roots the number of the branches, one-half to the daughter of the brother, the portion of the father, and the other between the children of the sister, the male having the allotment of two females, by considering the persons, and *the estate* is correctly divided by nine. If *a man* leave three daughters of different brothers' sons, in this manner:

The Deceased

Daughter—Daughter—Daughter.

Of a Son of a Brother by the same

Father and Mother—Father—Mother

all the property goes to the daughter of the son of the brother by the same father and mother, by the unanimous opinion *of the learned*, since she is the child of a residuary, and hath also the strength of consanguinity.*

ON THE FOURTH CLASS

The rule as to them *is*, that when there is only one of them, he has a right to the whole property, since there is none to obstruct him; and, when there are several, and the sides of their relation are the same, as paternal aunts and paternal uncles by the same mother *with the father*, or maternal uncles and aunts, then the stronger of them in consanguinity is preferred, by the general assent; I mean, they, who are *related* by father and mother, are preferred to those who are *related* by the father *only*; and they, who are *related* by the father, are preferred to those, who are *related* by the mother only, whether they be males or females; and if there be males and females and their relation be equal, then the male has allotment of two females; as, *if there be* a paternal uncle and aunt both by *one* mother, or a maternal uncle and aunt, both by the same father and mother, or by the same father, or by the same mother only; and if the sides of their con-

*The third class "are descended from the parents of the deceased" (see *pp.* 45,46): that is they are all descendants of the parents of *propositus* (other, of course, than those descended from *propositus* himself), except those who are sharers or residuaries. Observe that, in this class the tests are applied in the following order :—
I, Degree; 2. Child of residuary or not; 3, Blood.

sanguinity be different, then no regard *is shown* to the strength of relation ; as if *there be* a paternal aunt by the same father and mother, and a maternal aunt by the same mother, or a maternal aunt by the same father and mother, and a paternal aunt by the same mother only, then two-thirds *go* to the kindred of the father, for they *are* the father's allotment, and one-third to the kindred of the mother, for that is the mother's allotment; then what is allotted to each set is divided among them, as if the place of their consanguinity were the same.*

ON THEIR CHILDREN, † AND THE RULES CONCERNING THEM

The rule as to them *is* like the rule concerning the first class : I mean, *that* the best entitled of them to the succession is the nearest of them to the deceased on which

*The fourth class, "are descended from the two grandfathers and two grandmothers of the deceased" (see p. 46) ; but they are only the immediate descendants, *i. e.*, actual children see "Paternal Aunts," etc., *ibid.* The reader will perceive that this class has some special rules of its own, as distinguished from the other classes of d. k. Observe that, in this class, the tests are applied in the following order :—1. Paternal or maternal side. 2. Blood.

†Logically, the word *descendants* should have been used here for there could be no question of degree (as there is here, see the words "nearest of them to the deceased," etc.) between actual children of uncles and aunts. Observe, further, that the chapter treats not only, as might be supposed, of descendants of the fourth class of d. k., but also of such descendants of the fourth class of residuaries as are not themselves residuaries, *e.g.* paternal uncle's daughter.

ever side he is *related*; and, if they be equal in relation, and the place of their consanguinity be the same, then he who has the strength of blood, is preferred, by the general assent; and, if they be equal in degree and in blood, and the place of their consanguinity be the same, then the child of a residuary* *is* preferred to whoever is not *such*; as, *if a man leave* the daughter of a paternal uncle, and the son of a paternal aunt, both of them by *the same* father and mother, or by *the same* father, all the property goes to the daughter of the pateranal uncle; and, if one of them be by *the same* father and mother, and the other by the same father only, *then* all the estate goes to the claimant, who has the strength of consanguinity, according to the clearer tradition; *and this* by analogy to the maternal aunt by the same father, for though she be the child of a distant kinsman, yet she is preferred, by the strength of consanguinity, to the maternal aunt by the *same* mother *only*, though she be the child of an heir; since the weight which prevails by itself, that is, the strength of consanguinity, is greater than the weight by another, which is the descent from an heir. Some of them (the learned) say, *that* the whole estate goes to the daughter of the paternal uncle by the same father, since she is the daughter of a residuary;† and, if they be equal in degree yet the place of their relation differ, they have no regard *shown* to the strength of consanguinity, nor to

*Observe that, as at *p.* 52, the words "child of a residuary," not "child of an heir," are used; it will easily be seen that there cannot be a child of a sharer among the persons here considered.

†The passage "Some of them.....residuary" is, apparently parenthetical.

the descent from a residuary, according to the clearer tradition ; by analogy to the paternal aunt by the same father and mother, for though she have two bloods, and be the child of an heir on both sides, and her mother be entitled to a legal share, *yet* she is not preferred to the maternal aunt by the *same* father ; but, two-thirds *go* to whoever is related by the father ; and there regard is shown to the strength of blood ; then to the descent from a residuary ; and one-third *goes* to whoever is related by the mother, and there *too* regard is shown to strength of consanguinity : then, according to Abu Yusuf (may God be merciful to him !) what belongs to each set is divided among the persons of their branches, with attention to the number of sides in the branches ; and, according to Muhammed, (may God be merciful to him !) the property is distributed by the first line, *that* differs, with attention to the number of the branches and of the sides in the roots, as in the first class ; then this rule is applied the sides of the paternal uncles of his parents and their maternal uncles ; then to their children ; then to the side of the paternal uncles of the parents of his parents, and to their maternal uncles ; then to their children, as in the *case of* residuaries.*

*See *pp.* 24, 25, where the rights of such of the children of uncles, great uncles, etc., as are residuaries have been explained. Observe that, among the relations treated of in this chapter, the tests are applied in the following order :—1, Degree ; 2, Paternal or maternal side ; 3, Blood ; 4, Child of residuary or not.

ON HERMAPHRODITES

To the hermaphrodite, *whose sex is quite* doubtful, *is allotted* the smaller of two shares, I mean the worse of two conditions, according to Abu Hanifah, (may God be merciful to him!) and his friends, and this is the doctrine of the generality of the *Prophet's* companions, (may God be gracious to them!) and conformable to it are decisions *given* ; as, when *a man* leaves a son, and a daughter, and an hermaphrodite, then the hermaphrodite has the share of a daughter, since that is ascertained; and according to Aámir Alshábi (and this is the opinion of Ibnu Abbás, (may God be gracious to them both!) the hermaphrodite has a moiety of the two shares in the controversy ; but *the two great lawyers* differ in putting in practice the doctrine of Alshábi; *for* Abu Yusuf says, *that* the son has one share, and the daughter half a share, and the hermaphrodite three-fourths of a share, since the hermaphrodite would be entitled to a share, if he were a male, and to half a share, if he were a female, and this *is* settled by *his* taking half the sum of the two portions; or, we may say, he takes the moiety which is ascertained, together with half the moiety which is disputed, so that there come to him three-fourths of a share; for he (Abu Yúsuf) pays attention to the legal share and to the increase, and he verifies *the case* by nine: or, we may say, the son has two shares, and the daughter one share, and the hermaphrodite a moiety of the two allotments, and that *is* a share and half a share. But Muhammed (may God be merciful to him!) says, that the hermaphrodite would take two-fifths of the estate, if he were a male, and a fourth

of the estate, if he were a female, and that he takes a moiety of the two allotments, and that *will give him* one-fifth and an eighth by attention to both sexes ; and the case is rectified by forty ; since that is the product of one of the *numbers in the* two cases, which is four, multiplied into the other, which is five, and that product multiplied by two (*which is the number of the*) cases ; and then he, who takes anything by five, *has it* multiplied into four, and he, who takes anything by four, *has it* multiplied into five ; so that thirteen shares *go* to the hermaphrodite, and eighteen to the son, and nine to the daughter.*

ON PREGNANCY

The longest time of pregnancy *is* two years, according to Abu Hanifah (may God be merciful to him !) and his

*The word used by the translator as the title of this chapter (derived, as classical readers will remember, from one of Ovid's fantastic legends), signifies an individual possessing the essentials of both sexes, a monster which modern research has long since pronounced to be non-existent, or, at any rate, unauthenticated by any trustworthy record. But it will be seen from the text (see p, 59) that the Arabic word signifies a person whose sex is "doubtful ;" and it was reasonable, at a period when anatomical science must necessarily have been in its infancy, to lay down rules for such cases. At the present time, when surgical knowledge is much more advanced, it is not likely that this chapter can be of any practical use ; but it is reprinted with the rest of the book, in order that the reader may have a perfect reproduction of the Sirajiyyah before him. The working of the rules, which is very curious, is shown in Rums. M. L. I., 153, etc. ; see examples, *ibid.*, 205, 206.

companions ; and according to Laith, the son of Sad Alfahmi, (may God be merciful to him !) three years ; and according to Alshafii (may God be merciful to him !) four years :* but according to Alzuhri, (may God be merciful to him !) seven years : and the shortest time for it is six months. There is reserved for the child in the womb, according to Abu Hanifah (may God be merciful to him !) the portion of four sons, or the portion of four daughters, whichever of the two is most ; and there is given to the rest of the heirs the smallest of the portions ; but, according to Muhammed (may God be merciful to him !) there is reserved the portion of three sons or of three daughters, whichever of the two is most : Laith, son of Sád, (may God be gracious to him !) reports this *opinion* from him ; but by another report, *there is reserved* the portion of two sons ; and one of the two opinions is that of Abu Yúsuf (may God be merciful to him !) as Hishám reports it from him ; but Alkhassáf reports from Abu Yúsuf (may God be merciful to him !) that there should

*As to Alshafii, see also :—"la conception est admissible jusqu'au terme *maximum* de quatre ans," 2 Minh. at-tal, 259 : and see same vol., 458 ; vol, 3, 28, 44.

†This chapter, like the last preceding, belongs to a primitive and now discarded system of medical science ; it is reprinted, however, for the same reasons. An English judge or jury would of course be guided in any question as to possible length of pregnancy, by opinions gathered from medical experience, and not by the fanciful notions here recorded, which, in fact, are mere *dicta* of individual jurists, and cannot justly be looked upon as principles of law. The same remark applies to some of the subsequent portions of this chapter. That part, however, which treats of the portion to be reserved for an unborn child is just and scientific. The rules for calculating this portion will be found *infra*, *pp.* 62-64.

be reserved the share of one son or of one daughter ; and, according to this, decisions *are made* and security must be taken, according to his opinion. And if the pregnancy was by the deceased, and *the widow* produce a child at the full *time* of the longest period *allowed* for pregnancy, or within it, and the woman hath not confessed her having broken her legal term *of abstinence, that child* shall inherit, and others may inherit from him ; but, if she produce a child after the longest *time* of gestation, he shall not inherit, nor shall others inherit from him : and if the pregnancy was from another man than the deceased, and she, *the kinswoman*, produce a child in six months or less, he shall inherit ; but, if she produce the child after the least period of gestation, he shall not inherit.

Now the way of knowing the life of the child at the time of its birth, is, that there be found in him that, by which life is proved ; as a voice, or sneezing, or weeping, or smiling, or moving a limb ; and, if the smallest *part* of the child come out, and he then die he shall not inherit ; but if the greater *part* of him come out, and then he die, he shall inherit : and if he come out straight (*or with his head first*) then his breast is considered ; I mean, if his whole breast come out, he shall inherit ; but if he come out inverted (*or with his feet first*) then his navel is considered.

The chief rule in arranging cases on pregnancy is, that the case be arranged by two suppositions, I mean by supposing, that the child in the womb is a male, and by supposing, that it is a female ; then, compare the

arrangement of both cases : and, if the numbers agree, multiply the measure of one of the two into the whole of the other ; and if they disagree, then multiply the whole of one of the two into the whole of the other, and the product will be the arranger of the case : then multiply the allotment of him, who would have something from the case, which supposes a male, into that of the case, which supposes a female, or into its measure ; and then that of him, who takes on the supposition of a female, into the case of the male, or into its measure, as we have directed concerning the hermaphrodite ; then examine the two products of that multiplication ; and whether of the two is the less, that shall be given to such an heir; and the difference between them must be reserved from the allotment of that heir and, when the child appears, if he be entitled to the whole of that has been reserved, it is well ; but, if he be entitled to a part, let him take that part, and let the remainder be distributed among the *other* heirs, and let there be given to each of those heirs what was reserved from his allotment : as, when a man has left a daughter and both his parents, and a wife pregnant, then the case *is rectified* by twenty-four on the supposition, that the child in the womb is a male, and by twenty-seven on the supposition, that it is a female : now between the two numbers of the arrangement there is an agreement in a third ; and, when the measure of one of the two is multiplied into the whole of the other, the product amounts to two hundred and sixteen, and by that *number* is the case verified ; and, on the supposition of its male sex, the wife takes twenty-seven shares, and each of the two

parents, thirty-six ; but on the supposition of its female sex, the wife has twenty-four, and each of the parents, thirty-two ; and twenty-four are given to the wife, and three shares from her allotment are reserved ; and from the allotment of each of the parents are reserved four shares ; and thirteen shares are given to the daughter ; since the *part* reserved in her right *is* the allotment of four sons, according to Abu Hanifah, (may God be merciful to him !) and when the sons are four, then her allotment is one share and four-ninths of a share out of four-and-twenty multiplied into nine, and that makes thirteen shares ; and this *belongs* to her, and the residue *is* reserved, which *amounts to* an hundred and fifteen shares. If the widow bring forth one daughter or more, then all the *part* reserved *goes* to the daughters ; and, if she bring forth one son or more, then must be given to the widow and both parents what was reserved from their shares ; and what remains must be divided among the children : and, if she bring forth a dead child, then must be given to the widow and both parents what was reserved from their shares, and to the daughter a complete moiety, that is, ninety-five shares *more*, and the remainder, which is nine shares, to the father, since he is the residuary.*

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*The subject of this chapter is treated in Rums. M. L. I. 150, under the title, "Posthumous Children ;" for examples, see that work pp, 199-202, and below, Appendix Q. ; Tag. Lect., 1873, 182—186 : Bail M. L. I., 113-115.

ON A LOST PERSON

A lost person is *considered as* living in *regard* to his estate; so that no one can inherit from him ; and his estate is reserved, until his death can be ascertained ; or the term for *a presumption of* it has passed over : now the traditionary opinions differ concerning that term ; for, by the clearer tradition. "when, not one of his equals in age remains judgment may be given of his death," but Hasan, the son of Ziyad, reports from Abu Hanifah, (may God be merciful to him !) that the term is an hundred and twenty years from the day on which he was born ; and Muhammed says, an hundred and ten years ; and Abu Yusuf say, an hundred and five years ; and some of them, *the learned*, say, ninety years ; and according to that *opinion* are decisions *made*. Some of *the learned in the law* say, that the estate of a lost person must be reserved for the final regulation of the *Imam*, and the judgment suspended as to the right of another person, so that his share from the estate of his ancestors must be kept, as in the *case* of pregnancy ; and, when the term *is* elapsed, and judgment given of his death, then his estate *goes* to his heirs, *who are* to be found, according to the judgment on his decease ; and, what was reserved on his account from the estate of his ancestor, is restored to the heir of his ancestor, from whose estate that share was reserved ; since the lost person is dead as to the estate of another.

The principle in arranging cases concerning a lost person *is*, that the case be arranged on a supposition of his life, and then arranged on a supposition of his death ; and

the rest of the operation is what we have mentioned in the chapter of pregnancy.*

ON AN APOSTATE

When an appostate *from the faith* has died naturally, or been killed, or passed into a hostile country, and the *Kadi* has given judgment on his passage *thither*, then what he had acquired, at the time of his being a believer, *goes* to his heirs, *who are* believers ; and what he has gained since of the time of spostacy is placed in the public treasury, according to Abu Hanifah (may God be merciful to him !) but, according to the two *lawyers*

* In England presumption of death usually arises when a person has not been heard of for seven years ; this rule is substantially adopted by the Anglo-Indian legislature, see Act I, of 1872 ("The Indian Evidence Act, 1872"),s. 108. The 90 years' rule of "the learned" (see p. 65) has been held to be superseded by this enactment, see 2 Stokes, Ang. Ind. Cod., 911, note, citing Mazhar Ali *v.* Budh Singh, 7 All., 297.

The rule that anything which would accrue to a lost person is to be reserved, and afterwards, in case of his death being ultimately assumed divided, among the heirs of the ancestor, and not among those of the lost person, is consistent with the general disregard of a right of representation in Moohummudan law (see more fully as to this, Rums. M. L. I,. 8). It may however, have been framed independently of that principle, on the ground that the presumption of death should relate back to the time of disappearance. The latter theory seems to be favoured by the words in the text, "the lost person is dead as to the estate of another."

Examples on lost persons are given in Rums. M. L. I. 147, 208, 209 ; Tag, Leet., 1873, 193 ; Bail, M.L.I, 117.

(Abu Yusuf *and* Muhammed) both the acquisitions *go* to his believing heirs ; and, according to Alshafii,* (may God be merciful to him!) both the acquisitions are placed in the public treas ury ; and what he gained after his arrival in the hostile country, that is confiscated by the general consent ; and all the property of a female apostate *goes* to her heirs, *who are* believers,† without diversity af opinion among our masters to whom God be merciful ! but an apostate shall not inherit from any one, neither from a believer nor from an apostate like himself, and so a female apostate shall not inherit from any-one; except when the people of a whole district become apostates altogether, for then they inherit reciprocally.‡

ON A CAPTIVE§

The rule concerning a captive is like the rule of other believers in regard to inheritance, as long as he has not departed from the faith ; but, if he has departed from the faith, then the rule concerning him *is* the rule concerning an apostate ; but, if his apostasy be not known nor his life nor his death, then the rule concerning him *is* the rule concerning a lost person. ‖

*See also, as to Alshafi :— "L'apostat n'est heritier de personne, et personne ne peut heriter de lui," 2 Minh, at-tal, 243.

† Whether acquired before or after her apostacy, Ali P.L.M,, 98, citing this passege : and 6 Fat-i-Al. 633.

‡This subject is treated more at length in Rums. M. L. I, 184, etc.

§This subject ("captive") is treated more at lenght in Rums. M. L. I, 158, 341' etc.

‖ As to lost persons. see p. 65.

ON PERSONS DROWNED, OR BURNED, OR OVERWHELMED IN RUINS

When a company *of persons* die, and it is not known which of them died first, they are considered, as if they had died at the same moment ; and the estate of each of them *goes* to his heirs, *who are* living ; and some of the deceased shall not inherit from others : this is the approved *opinion*. But Ali, and Ibnu Masuud say, according to one of the traditions from them, *that* some of them shall inherit from others, except in what each of them has inherited from the companion of his fate.*

* Suppose, for instance, that a man possessed of property has perished by the same calamity with one of his sons, leaving other sons surviving, and that the deceased son has left a son. According to the "approved opinion," the property will go to the "heirs who are living," that is, to the surviving sons ; and "some of the deceased shall not inherit from others," so that the deeased son will not be deemed to have became entitled to anything : and his son will get nothing. If, however, the other opinion were accepted, the deceased son would be deemed to have been entitled to his portion as a residuary, and that portion would descend to his son. This subject is dealt with more at lenght in Rums. M. L. I. 161, etc., for examples, see *ibid*, 211, 212 ; Tag, Lect., 1873, 196 ; Bail. M. L. I., 120,

THE END OF THE SIRAJIYYAH.

APPENDIX

A. (*p.* 12, 23.)

SHARERS.—Husband,
Father (sometimes residuary also),
True Grandfather, h. h. s. (,,),
U. Brother,
Wife,
Daughter (sometimes residuary),
Son's h. l. s. Daughter (,,),
Mother,
True Grandmother, h. h. s.,
Sister (sometimes residuary),
C. Sister (,, ,,),
U. Sister.

RESIDUARIES,*—Son,
(*always*) Son's Son, h. l. s.,
Brother,
C. Brother,
Brother's Son, h. l. s.,
C. Brother's Son, h. l. s.,
Paternal Uncle,
C. Paternal Uncle,
Paternal Uncle's Son, h. l. s.,
C. Paternal Uncle's Son, h. l. s.,
All other males related entirely through males.

* i.e., residuaries "by relation," or on account of relationship. It will be remembered that residuaries "for special cause" are not necessarily relations, see *pp.* 13, 25, 16.

RESIDUARIES,—Father,
(*somtimes*)* True Grandfather, h. h. s.,
Daughter,
Son's h. l. s. Daughter,
Sister,
C. Sister.

N.B.—Observe that the distant kindred are all relations who are not sharers or residuaries.† Residuaries and d. k. are sometimes called, respectively, agnates and cognates (see "agnats," "cognats," Minh. at. tal., 224, 228, etc.), but these terms may mislead, as the agnates and cognates of Roman law are not exactly co-extensive with residuaries and d. k. The term "residuaries," it is submitted, is perfectly satisfactory. "Distant kindred" is not so good as d. k. may evidently be nearer relations than sharers or residuaries,‡ but it may be conveniently used until some better term is thought of.

A[1]. (*p.* 16.)

The "four cases" in which true grandfather differs from father and be thus briefly described :—

1.—Father's father takes residue after payment of father's mother's share, one-sixth, whereas father would exclude her and take the whole residue : so also *mutatis mutandis* with higher ancestors, see *p.* 22.

2.—Mother takes only one-third of remainder after

* For circumstances under which they are residuaries, see, as to father and true grandfather *pp*, 15, 16, as to the others, *pp.* 18-21.

† See *pp.* 44, 45.

‡ *e.g.*, Mother's father is nearer than mother's mother's mother, and daughter's son than son's son's son.

husband's or wife's share if father is living; one-third of the whole if true grandfather instead of father, see *p.* 22.

3.—According to some opinions, true grandfather shares in a peculiar manner with brothers, etc., instead of excluding them as father does; see *pp.* 21. 22, and chapter "On the Division of the Paternal Grandfather." *p.* 40.

4.—True grandfather of manumittor cannot have any portion of deceased freedman's property if son of manumittor be living; father, according to one opinion, would have one-sixth, see *p.* 26.

It is scarcely necessary to point out that all these distinctions are to the disadvantage of true grandfather as compared with the father, being exceptions to the general rule that "the true grandfather has the same interest with the father." see *p*, 16.

A². (*pp.* 31, 32.)

"Now the way of knowing.....the denominator."

It is easy to show that "agreement" means g. c. m., and that this is a rule for finding the g. c. m. by subtraction.* We shall first exemplify the Arabian method by finding the agreement between twenty-eight and eight.

Twenty-eight	Eight
Twenty	Four.
Twelve	
Four.	

Here, adopting, for convenience, the arrangement of a double column, and subtracting from right to left, and *vice versa*, we have gone through the process indicated by the rule in the text. The following are the several

* *i.e.*, "subtraction" in the ordinary sense, not in the technical sense in which it is used at *p.* 37.

steps :—Eight, subtracted from twenty-eight, leaves twenty ; eight from twenty, twelve ; eight from twelve, four ; four from eight, four.—Now, therefore, we have the two numbers agreeing "in one point', ; and that point being four, they are said to agree in four or in a fourth.

The reader will now understand the following example, in which the numbers "agree in unit only," and have therefore "no numerical agreement between them" ; or, as we should express it in Europe, the numbers have "no common measure" or "no common measure but unity."

Twenty-four	Seventeen
Seven	Ten
Four	Three.
One.	

The simplicity of this rule will probably take European arithmeticians by surprise. It is not necessary to offer any demonstration of its correctness, except so far as to prove that it is identical in its result with the European rule for finding the g. c. m., for our readers can find a demonstration of the last mentioned rule in any ordinary work on algebra. In order to show the identity, we shall now give an example, worked out both in the Arabian and in the European manner :—

Find the agreement between fifty-five and one hundred : *and*, find the g. c. m. of 55 and 100.

Arabian method—(The reader will remember the words "once or oftener" in the Arabian rule, and will observe that several successive subtractions effect the purpose of one division) :—

Fifty-five	One hundred
Ten	Forty-five
Five.	Thirty-five
	Twenty-five
	Fifteen
	Five.

Hence the numbers agree in five.

Europeon method:—

55) 100 (1
55
—
45) 55 (1
45
—
10) 45 (4
40
—
5) 10 (2
10
—

Hence, the g. c. m. is five. It is shown, therefore, that the agreement found by the Arabian method is the same as the g. c. m. found by the European rule.

The following, however, is a more *general* proof of the identity of result of the European and Arabian methods :—

First : find the g, c. m. of a and b by the European method.

$$
\begin{array}{l}
a)\ b\ (x \\
\quad ax \\
\quad \overline{} \\
b-ax)\ a\ \ (y \\
\quad (b-ax)\ y \\
\quad \overline{} \\
a-(b-ax)y)\ b-ax\ \ (z \\
\quad \underline{[a-(b-ax)\ y]z}
\end{array}
$$

Here, it is supposed that $a-(b-ax)\ y$ is the last divisor, going exactly z time into $b-ax$, and is consequently the g. c. m. Hence :—

$$b-ax=[a-(b-ax)\ y\ ]\ z \quad . \quad . \quad . \quad . \quad . \quad (1.)$$

Secondly ; find the agreement of a and b by the Arabian method.

Remembering, from above, that a is contained in $b\ x$ times with a remainder over, it is evident that in

applying the Arabian method we shall subtract b several times, and get the successive remainder b-$2a$, etc., till at last we arrive at $b—ax$, a rer smaller than a. We shall then subtract that and the successive remainders in the same r till we arrive at remainder $a—(b—ax)\,y$, wl smaller than $b—ax$. Lastly, we shall subtract $ax)\,y$ from $b—ax$, and the successive remainde we arrive at $b—ax—[a—(b—ax)y]\ (z—1)$; the may thus be exhibited in double columns :—

a	b
$a—(b—ax)$	$b—a$
$a—2(b—ax)$	$b—2a$
.....	.....
$a—(b—ax)\,y$	$b—ax$
	$b—ax—[a—(b—ax)\,y\,]$
	$b—ax—2[a—(b—ax)\,y]$
	.....
	$b—ax—[a—(b—ax)\ y]\ (z—1$

Now the results are identical if $a—(b—ax)$ g. c. m., is also the agreement between th numbers, *i.e.*, if $a—(b—ax)y=b—ax—[a—(b-(z—1)$; but we have from above, (1.),

$$b—ax=[a—(b—ax)y]\ z$$

subtract $a—(b—ax)y$ from both sides, and we shal

$$b—ax—[a—(b—ax)\ y] = [a—(b—ax)\ y]\ (z—$$

or, transposing $b—ax$ and changing signs,

$$a—(b—ax)\ y=b—ax—[a\ (b—ax)y]\ (z—1)$$

Hence the identity of the results is proved.

B.(*p.* 33.)

First principle between shares and person the portions.....multiplication." Examp Father, mother, two daughters :—

Father, one-sixth.

Mother, one-sixth.

Two daughters, two-thirds, or four-sixths.

Here the root* is six ; father takes an entire sixth, mother an entire sixth, each daughter two entire sixths. Consequently the sixths are delivered entire ; the portions are "divided without a fraction," † and the root need not be multiplied by any other number ; in other words, the arrangement, or ultimate *l. c. d.*, is identical with the root.

C. (*p.* 33).

Second principle between shares and persons, "if the portions . . . . . root of the case." Example : —Father, mother, ten daughters—

Father, one-sixth.

Mother, one-sixth.

Daughters, two-thirds, or four-sixths.

The root is six ; but ten agrees with four,‡ (the daughters' portion from the root), in two. The root must be multiplied by the measure of ten ; and the measure of ten is then divided by two, or five.§ Multiplying six by five we get thirty.

*For meaning of "root"(or "divisor"), and mode of ascertaining the root in any particular case, see Chapter "On the Divisors of Shares," *p.* 28.

†*i.e.*. each portion is given to one person, not divided among two or more.

‡Here, and elsewhere, we leave out the actual work of finding the agreement of numbers, in order to economise space. For Arabian and European modes of finding it, see Appendix A2.

§The expression "measure of a number" is not defined ; but observation and experiment show that it is as follows :—Having found the agreement of two numbers, divide either of those numbers by the agreement, the quotient is the "measure" of the number so divided.

And it is clear that 30 is the l. c. d. of.

$\frac{1}{6}$, $\frac{1}{6}$, $\frac{1}{10}$ of $\frac{2}{3}$

or $\frac{1}{6}$, $\frac{1}{6}$, $\frac{1}{15}$

D. (*p.* 33.)

Third principle between shares and persons, "if their portions leave a fraction . . . . . root of the case." Example :—Husband, five sisters by the same father and mother—

Husband, one-half.

Five sisters, two thirds.

The root is six. Five, the number of sisters, and four, their portion from the root, have no agreement. Consequently the root must be multiplied by the "whole number of persons whose shares are broken," *i.e.*, by five ; and we get thirty, which is the l. c. d. of

$\frac{1}{2}$, $\frac{1}{5}$ of $\frac{2}{3}$

or $\frac{1}{2}$, $\frac{2}{15}$

E. (*p.* 33.)

First principle between persons and persons, "when there is a fractional . . . . . root of the case." Example :—Six daughters three true grandmothers, three paternal uncles—

Six daughters, two-thirds.

Three true grandmothers, one-sixth.

Three paternal uncles, residue.

The root is six. Here at first sight it would seem that the numbers of persons are not all equal, since there are six daughters, and only three of each of the other classes. But it is tacitly assumed, though not actually stated, that the six is reduced to Two wives, it

would be if we were working out the second principle between shares and persons, because the daughter's portions from the root are four, and as four and six agree in two, six divided by two, or three, is the measure of six. Consequently the case is treated, for the purpose of finding the multiplier, as if the number of daughters were three, and therefore equal to the other numbers of persons. Multiplying the root by three, we get eighteen, which is the l. c. d. of :—

$\frac{1}{6}$, of $\frac{2}{3}$, $\frac{1}{3}$ of $\frac{1}{6}$, $\frac{1}{3}$ of $\frac{1}{6}$ (residue),

or $\frac{1}{9}$, $\frac{1}{18}$, $\frac{1}{18}$

F. (*p.* 33.)

Second principle between persons and persons, when some of the numbers equally . . . . . root of the case." Example :—Four wives, three true grandmothers, twelve paternal uncles—

Four wives, one fourth.

Three true grandmothers, one-sixth.

Twelve paternal uncles, residue.

The root is twelve. Four and three "equally measure" twelve, *i.e.*, are factors of twelve, so we must multiply the root by twelve, and we get a hundred and forty-four, which is the l. c. d. of :—

$\frac{1}{4}$ of $\frac{1}{4}$, $\frac{1}{3}$ of $\frac{1}{6}$, $\frac{1}{12}$ of $\frac{7}{12}$ (residue),

or $\frac{1}{16}$, $\frac{1}{18}$, $\frac{7}{144}$

G. (*p.* 34.)

Third principle between persons and persons, when some of the "numbers are *mutawafik* . . . . . root of the case." Example :—Four wives, eighteen

daughters, fifteen* true grandmothers, six paternal uncles—

Four wives, one eighth.

Eighteen daughters, two-thirds.

Fifteen true grandmothers, one-sixth.

Six paternal uncles, residue.

The root is twenty-four. It will be remembered that eighteen, the number of daughters, must be reduced to nine, since eighteen agrees with sixteen (the daughters' portion from the root), is two, so that eighteen divided by two, or nine, is the measure of eighteen. Four and nine have no agreement, so we must multiply four by nine, and we get thirty-six. Thirty-six and fifteen agree in three, and the measure of fifteen, or fifteen divided by three, is five. Multiplying thirty-six into five, we get one hundred and eighty. This and the fourth number, six, agree in six, so the measure of six is six divided by six, or one, and the final product is one hundred and eighty. Multiplying this into the root of the case, twenty-four, we get four thousand three hundred and twenty, which is the l. c. d. of :—

$\frac{1}{4}$ of $\frac{1}{8}$, $\frac{1}{15}$ of $\frac{2}{3}$, $\frac{1}{15}$ of $\frac{1}{6}$, $\frac{1}{6}$ of $\frac{1}{24}$ (residue),

or, $\frac{1}{32}$, $\frac{1}{27}$, $\frac{1}{90}$, $\frac{1}{144}$

H. (*p.* 34.)

Fourth principle between persons and persons, "when the numbers are *mutabayan* . . . root of the case." Example :—

*This is an impossible case, for we should have to ascend fifteen generations to get fifteen true female ancestors on a level (so to speak) who would inherit together. It is given, however, as an example, in the page above referred to.

Two wives, six true grandmothers, ten daughters, seven paternal uncles—*

Two wives, one-eighth.

Six true grandmothers, one-sixth.

Ten daughters, two-thirds.

Seven paternal uncles, residue.

Here again the root is twenty-four. The number of the daughters must be divided by two, and becomes five. Two and six agree in two, and the measure of six is three. These have no agreement with five or seven, and five and seven have no agreement with one another, so we must multiply two, three, five, and seven together, and we get two hundred and ten. Multiplying this product into the root, we get five thousand and forty, which is the l. c. d. of :—

$\frac{1}{2}$ of $\frac{1}{8}$, $\frac{1}{6}$ of $\frac{1}{6}$, $\frac{1}{10}$ of $\frac{2}{3}$, $\frac{1}{7}$ of $\frac{1}{24}$ (residue) ;

or, $\frac{1}{16}$, $\frac{1}{36}$, $\frac{1}{112}$, $\frac{1}{1684}$.

I. (*p.* 34.)

In applying the "seven principles" we must always be careful to consider the portions from the root of the case, and to begin by ascertaining whether the second principle between sharers and persons is applicable. It is rather singular that the examples in the Sirajiyyah

*It will be perceived that this example belongs partially to the third principle between persons and persons. A better example, strictly speaking, of the fourth principle, would be : two wives, five true grandmothers, seven daughters, eleven paternal uncles, where none of the numbers have any agreement ; the root, twenty-four, must be multiplied by the product of two, seven, five and eleven, and we get eighteen thousand four hundred and eighty, which is the l. c. d. of $\frac{1}{2}$ of $\frac{1}{8}$, $\frac{1}{5}$ of $\frac{1}{6}$, $\frac{1}{7}$ of $\frac{2}{3}$, 11 of $\frac{1}{24}$ (residue) ; or $\frac{1}{16}$, $\frac{1}{30}$, $\frac{1}{231}$, $\frac{1}{2664}$.

only show the applicability of this principle to the share two-thirds, but it is evident that may be required equally for others shares. Thus, if we have :—

One wife, one-eighth.
Three daughters, two-thirds.
Ten true grandmothers, one-sixth.
One paternal uncle, residue.

The root is twenty-four. The grandmothers' portion from the root is four, and four and ten agree in two, therefore the measure of the number of true grandmothers is five. If we forget this we shall multiply the root by thirty, so as to get seven hundred and twenty for the arrangement, whereas it is clear that three hundred and sixty (twenty-four multiplied by fifteen) is the true arrangement, and is the l. c. d. of :—

$\frac{1}{8}$, $\frac{1}{2}$ of $\frac{2}{3}$, $\frac{1}{10}$ of $\frac{1}{6}$, $\frac{1}{24}$ (residue)
or, $\frac{1}{8}$, $\frac{2}{9}$, $\frac{1}{60}$, $\frac{1}{24}$.

J. (*p.* 35.)

"When thou desirest.....share of that class."

To show the working of this rule, we continue the case given in Appendix G, viz.—four wives, eighteen daughters, fifteen true grandmothers, six paternal uncles. It will be remembered that the root is twenty-four; and it is easily ascertained by inspection that the portions of the classes from the root of the case* are :—

*By the expression "what each class has from the root of the case" is meant, as will be clearly seen by those who work out the example here given, the numerator of the fraction accruing to each class (as wives, daughters, etc,), so long as the root is treated as the l. c. d. ; in other words, the portion which each person would have if there were only *one* wife, *one* daughter, etc.

Wives, three.

Daughters, sixteen.

True grandmothers, four.

Paternal uncles, one.

Multiplying by one hundred and eighty, the number which we have previously multiplied into the root of the case, we get:—

Wives, five hundred and forty.

Daughters, two thousand eight hundred and eighty.

True grandmothers, seven hundred and twenty.

Paternal uncles, one hundred and eighty.

According to European arithmetic* the result is clearly the same, for we shall have:—

Wives, $\frac{1}{8}$ of 4320=540.

Daughters, $\frac{2}{3}$ of 4320=2880.

True grandmothers, $\frac{1}{6}$ of 4320=720.

Paternal uncles, $\frac{1}{24}$ of 4320=180.

K. (*p.* 35.)

"If thou desirest to know...individual of that class."

To illustrate these three methods we continue working the same example.

First method:—

Four wives taking five hundred and forty parts from the principle of the case, each wife takes five hundred and forty divided by four, or one hundred and thirty-five. Similarly, each daughter takes two thousand eight hundred and eighty divided by eighteen, or one hundred

* It may be remarked, however, that in Europe we should not think it necessary to exhibit the shares of the classes, but should at once go on to find the shares of individuals. For the Arabian method of finding these shares, see Appendix K.

only show the applicability of this principle to the share two-thirds, but it is evident that may be required equally for others shares. Thus, if we have :—

One wife, one-eighth.
Three daughters, two-thirds.
Ten true grandmothers, one-sixth.
One paternal uncle, residue.

The root is twenty-four. The grandmothers' portion from the root is four, and four and ten agree in two, therefore the measure of the number of true grandmothers is five. If we forget this we shall multiply the root by thirty, so as to get seven hundred and twenty for the arrangement, whereas it is clear that three hundred and sixty (twenty-four multiplied by fifteen) is the true arrangement, and is the l. c. d. of :—

$\frac{1}{8}$, $\frac{1}{2}$ of $\frac{2}{3}$, $\frac{1}{10}$ of $\frac{1}{6}$, $\frac{1}{24}$ (residue)
or, $\frac{1}{8}$, $\frac{2}{9}$, $\frac{1}{60}$, $\frac{1}{24}$.

J. (*p.* 35.)

"When thou desirest.....share of that class."

To show the working of this rule, we continue the case given in Appendix G, viz.—four wives, eighteen daughters, fifteen true grandmothers, six paternal uncles. It will be remembered that the root is twenty-four; and it is easily ascertained by inspection that the portions of the classes from the root of the case* are :—

*By the expression "what each class has from the root of the case" is meant, as will be clearly seen by those who work out the example here given, the numerator of the fraction accruing to each class (as wives, daughters, etc,), so long as the root is treated as the l. c. d. ; in other words, the portion which each person would have if there were only *one* wife, *one* daughter, etc.

Wives, three.
Daughters, sixteen.
True grandmothers, four.
Paternal uncles, one.

Multiplying by one hundred and eighty, the number which we have previously multiplied into the root of the case, we get:—

Wives, five hundred and forty.
Daughters, two thousand eight hundred and eighty.
True grandmothers, seven hundred and twenty.
Paternal uncles, one hundred and eighty.

According to European arithmetic* the result is clearly the same, for we shall have:—

Wives, $\frac{1}{8}$ of 4320=540.
Daughters, $\frac{2}{3}$ of 4320=2880.
True grandmothers, $\frac{1}{6}$ of 4320=720.
Paternal uncles, $\frac{1}{24}$ of 4320=180.

K. (*p.* 35.)

"If thou desirest to know...individual of that class."

To illustrate these three methods we continue working the same example.

First method:—

Four wives taking five hundred and forty parts from the principle of the case, each wife takes five hundred and forty divided by four, or one hundred and thirty-five. Similarly, each daughter takes two thousand eight hundred and eighty divided by eighteen, or one hundred

* It may be remarked, however, that in Europe we should not think it necessary to exhibit the shares of the classes, but should at once go on to find the shares of individuals. For the Arabian method of finding these shares, see Appendix K.

and sixty; each true grandmother, seven hundred and twenty divided by fifteen, or forty-eight; each paternal uncle, one hundred and eighty divided by six, or thirty.

Second method:—

The "multiplied number" is the number "multiplied into the root of the case," *i.e.*, one hundred and eighty.

For each wife, divided by four, the number of wives, and multiply by three; the share* from the root of the case; and we get one hundred and thirty-five.

For each daughter, divide by eighteen, and multiply by sixteen, and we get one hundred and sixty.

For each true grandmother, divide by fifteen, and multiply by four, and we get forty-eight.

For each paternal uncle, divide by six, and multiply by one, and we get thirty.

Third method:—

The share of the wives from the root of the case is three; the number of wives, four. The proportion, or rather the ratio, is three to four. We have now to find the number which has the same ratio to one hundred and eighty that three has to four, and it is easily ascertained that this is one hundred and thirty-five.

The portions of the individuals of the other classes will be found in the same way.†

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*The Sirajiyyah merely says, "the share of that set." but it is evident that the "share from the root of the case" is meant; for if we multiplied by the share "from the principle of the case" we should make the ultimate share of each individual larger than that of the entire class to which he belongs.

† The "tried method" points, apparently, to some mechanical mode of ascertaining a fourth proportional. In Europe we are so accustomed to multiply and divide that we are apt to forget that proportion as an intrinsic mechanical relation of things, and that the arithmetical process of multiplication and division is only the

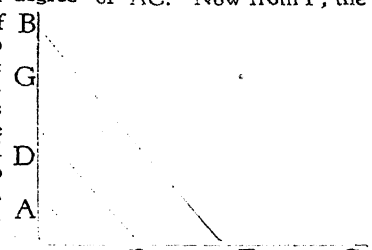
L. (*p.* 36)

"Now, as to the payment of debts, the debts of all the creditors stand in the place of arranging number." It will be remembered that debts are paid before distribution of the estate among relations (see *p.* 12). Consequently, when the estate is sufficient to pay all the creditors, they take, in full, the sums due to them, and there is no necessity for any rule of distribution among them. The rule above stated is therefore required only when the estate is insufficient for entire payment of the debts, in which case it furnishes, in connection with what has been learnt from the previous portion of the work, a perfect guide for dividing the property among the creditors in the exact proportion of the amounts actually due to them respectively. This will be best explained by an example :—

A man dies, leaving an estate of four hundred gold mohurs. There are three creditors one of whom claims three hundred, another, two hundred, a third, one hundred. It is evident that the estate is insufficient to pay all three claims, and all the debts

means of ascertaining it. The mechanical mode used by the Arabians may perhaps have been as follows :—

Let A B, A C, be two graduated rods inclined to one another at any angle, and joined at *A*. From D, the third degree of A B; stretch a string to E, the fourth degree of AC. Now from F, the hundred and eightieth degree of A C, stretch a string parallel to E D, meeting *A* B in G. A G will be to A F as A D to A E (as we know from the principles of geometry), and it will be found that G is the hundred and thirty-fifth degree of A B, so that the fourth proportional, one hundred and thirty-five, will be ascertained.



must be diminished so that each creditor may receive his due proportion. We have, then :—

First creditor, three hundred.

Second creditor, two hundred.

Third creditor, one hundred.

In order to find the arrangement we add these sums together, and we get six hundred. This will be the denominator of all the fractions. The numerators are the several numbers, three hundred, two hundred, and one hundred ; and the estate will be divided among the creditors as follows :—

First creditor, three hundred six hundredths, or one-half.

Second creditor, two hundred six hundredths, or one-third.

Third creditor, one hundred six hundredths, or one-sixth.

This rule, almost unexampled, even in the Sirajiyyah, in brevity of expression, does the work of the rule of "proportionate parts," which may be found stated and exemplified in any European treatise on Algebra and Arithmetic. The property is exactly divided, since the sum of numerators is exactly equal to the denominators, and it is divided in due proportion; because there is a common denominator, and therefore the fractions are to each other in the ratios of the numerators, that is, in the ratios of the debts of the several creditors.* The reader will recognize the practical identity of this rule with that of the "increase" (see *p.* 29).

The earlier part of this chapter will be understood by those who have worked through the "principles of arrangement," etc., in the preceding portions of the Sirajiyyah.

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*In English legal phraseology, the debts "abate in proportion.' By an extraordinary survival of injustice, an executor, according to *English* law, may, at pleasure, prefer any debt (even his own) to other debts of equal degree!

M, (*p.* 37.)

This chapter may seem superfluous, as it only amounts to this, that if one person takes his share before the general division, the others take precisely the same portions that they would have if the whole process of division were effected, as usual, at the same time. The exemple in the text involves an allusion to the law of dower, of which the reader will find no explanation in the Sirajiyyah. Dower is a sum of money* given *or promised* by the husband to the wife. When it is not actually given at the time of marriage, it is said to be "deferred," and the problem here proposed is an example of the division of deferred dower. Dower is the absolute property of the wife, and descends like any other property that she may possess. In the case proposed, we have accordingly:

Husband, one-half.

Mother, one-third,

Paternal uncle, residue, one-sixth.

It is clear, therefore, that if the husband retains his moiety (or, as stated in the text, "agrees to take what was in his power"), one half remains; and as one-half is equal to three-sixth, the mother will take two sixths (or one-third), and the uncle one-sixth; "and thus," in the words of the text, "there will be two parts for the mother" (*i,e.*, of what remains after the husband's share is subtracted), "and one for the uncle." The case is so simple that we have not thought it necessary to work it out with the usual formalities of finding the root, etc.: and our only reason for offering any explanation of this and some other passage of slight importance is, that the rules given in the text, by their extreme terseness and apparent want of connection with other parts of the work, might, if passed over without explanation, lead the reader to suppose that some new process was indicated.

*Or other property.

N. (p. 37.)

The calculation of the return is sometimes complicated by the presence of a husband or wife, who is not allowed to partake of it* (see page above referred to). The point that we have to arrive at is, of course, the division of the whole property (or, as the case may be, the whole remaining property after payment of the husband or wife), among the sharers in proportion to the amount of their sharers from The root. the Sirajiyyah classifies cases of return in four divisions :—

First division, "when there is. . . . number of persons." Example :—two daughters. Settle by two ; *i.e.*, substitute two for three, which would otherwise be the root of the case ; each daughter thus takes one-half.

Second division, " when there are joined . . . and a third." In this, as in the first division, we simply use the converse process to that of the increase; *i.e.*, we diminish the root (instead of increasing it), so as to make it equal to the aggregate number of parts from the root. Thus if we have :—

Two daughters, two-thirds or four-sixths.

Mother, one-sixth.

The root is six ; but the portions from the root are four and one, which together make five, consequently the root is reduced to five, so that each daughter takes two-fifths, and mother one-fifth. It is clear that here, as in the increase, the *relative* value of the shares remain undisturbed.

Third division, when there is only one class entitled

*Numerous examples of the return, and of its converse (see p. 37), the increase, are worked out by European arithmetic in Rums. M. L. I., chap. viii.; and others are scattered among the miscellaneous examples, etc., in that work.

:eturn,* and there is also a person (husband or wife),† :akes no return, "then give the share.....the case right."

Here are three cases, which, notwithstanding some :onfusion and obscurity of language, can be made out vithout much difficulty. Example (first case :—husband; hree daughters.

Husband, one-fourth.
Three daughters, two-thirds.

The case‡ of the persons who take a return is to be ettled according to the number of persons ; *i.e*,, the ase is three. Now we give the husband "his share ccording to the lowest denominator,"§ *i.e.*, we suppose division into four parts and we give him one, and here are three parts remaining. But this residue exactly uadrates with (*i.e.*, is equal to) the number of daughers; so, "It is well," *i.e.*, we retain four as the root, vithout multiplying.

Example (second case) :—husband, six daughters.
Husband, one-fourth.
Six daughters, two-thirds.

The case is six. Proceeding as before, we find that ıe residue after paying the husband is three, which gree with six, the number of daughters, in three, herefore the measure of six is six divided by three, or vo, so we must multiply four by two, and we get eight.

Example (third case) :—husband ; ten daughters.
Husband, one-fourth.
Ten daughters, two-thirds.

The actual words are, "when in the first case;" the example ows that this is the meaning.

† Father and true grandfather are also persons whe take no turn (see p. 37, note), but they are not mentioned here, cause they are residuaries as well as sharers, so that, in the pre- nce of either of them, no one has any return.

‡ The word "case" is used here, and later, in a special sense ıich will be understood from the context.

§ As to this word, see p. 39, note.

The case is ten ; and three is not equal to ten, and has no agreement. Consequently we must multiply four by ten, and we get forty.

In these three cases the shares will be found in the usual way;* the denominator last found being treated as the arrangement, and the primary share of the person who takes no return being treated as the root. Thus in the third case we have :—

Husband (from the root), one.
Ten daughters (from the root), three.

Multiplying by ten, and afterwards, in the case of the daughters, dividing by ten to obtain the shares of individuals, we have :—

Husband, ten.
Ten daughters, thirty; each, three.

Fourth division, when there are several classes entitled to the return, and there is also a person (husband or wife)† who takes no return, "then divide what remains.....shares of both classes."

Here we have two cases. Example (first case):—wife, true grandmother, two half sisters by the mother's side.

Wife, one-fourth.
True grandmother, one-sixth.
Two U. sister, one-third, or two-sixths.

The case of those who partake in the return is three, and we have to divide by it "what remains from the denominator, etc,"‡ *i.e.*, three; and we find that it exactly "quadrates." Consequently "it is well;" the number four, without any mutliplication, is to be treated as the root.

Example (second case):—four wives, nine daughters, six true grandmothers.

* See Appendix J,K.

† See p. 87, second note, which applies equally here.

‡ In other words, what remains after subtracting the numerator, one, from the denominator, four.

Four wives, one-eighth.
Nine daughters, two-thirds, or four-sixths.
Six true grandmothers, one-sixth.

The case of those who are entitled to a return is five and this does not quadrate with seven, the quantity which "remains from the denominator" of the wives' share. Therefore we must multiply the denominator eight by five, and we get forty, which must be treated as the root.

To find out the ultimate shares of classes and individuals in cases of return included in the "third division" and "fourth division," we must apply the usual principles of arrangement.* Thus, from the last example, as four and nine have no agreement, we multiply four by nine, and we get thirty-six. This is exactly measured by six, so we must multiply the root by thirty-six, and we get, for the whole number of parts, one thousand four hundred and forty.

The shares of classes from the root are :—
Four wives, five.
Nine daughters, twenty-eight.†
Six true grandmothers, seven.†

Multiplying by thirty-six for the classes, and then dividing by the respective numbers of the individuals, we get :—

Four wives; one hundred and eighty; each, forty-five.

Nine daughters ; one thousand and eight ; each, one hundred and twelve.

Six true grandmothers ; two hundred and fifty-two ; each, forty-two.

By European arithmetic the same results will be obtained, for we have :—

* See Appendix B—K.

† It must be remembered that the daughters and grandmothers have to divide among them, from the root, the thirty-five parts which are left after allowing for the five parts (one-eighth of the wives, the daughters taking four-fifths of it, the grandmothers, one-fifth.

4 Wives; $\frac{1}{8}$; each, $\frac{1}{32}$.
9 daughters and 6 true grandmothers; $\frac{7}{8}$ to be divided in the ratio $\frac{2}{3} : \frac{1}{6}$, or 4 : 1; hence;
9 daughters; $\frac{4}{5}$ of $\frac{7}{8} = \frac{7}{10}$; each, $\frac{1}{9}$ of $\frac{7}{10} = \frac{7}{90}$
6 true grandmothers'; of $\frac{7}{8} = \frac{7}{40}$, each, $\frac{1}{6}$ of $\frac{7}{40} = \frac{7}{240}$
Reducing $\frac{1}{32}$, $\frac{7}{90}$, $\frac{7}{240}$ to the l.c.d., we have,
Each wife; $\frac{45}{1440}$
Each daughter; $\frac{112}{1440}$
Each true grandmother; $\frac{42}{1440}$

O. (*p.* 43.)

Rule for calculating vested inheritances, "that the case of the first deceased ..... so on to infinity." Example:—A woman (the "first deceased," *i.e.*, the *proposita*) leave husband, daughter by former husband, mother; husband dies before distribution, leaving wife, father, mother; daughter dies, leaving two sons, daughter, maternal grandmother.*

From the first deceased we have:—
Husband, one-faurth.
Daughter, one-half.
Mother, one-sixth.

The root is twelve, and this is a case of return, since the shares from the root, three, six, and two, only amount to eleven.

The case of those who entitled to the return is four

*Worked out by European arithemetic in Rums.M.L,I., 140. In preparing the previous edition of the present work we misunderstood this example in some respects. As now worked out, it gives results in accordance with Shar. 91.

residue from the share of the husband, who does not partake of the return, is three, which does not quadrate with four, so we must multiply four, the denominator of the person who has no return, by four, the case of those who take the return, and we get sixteen.

Sixteen is therefore the first arrangement, and the allotments out of it are :—

Husband, four.
Daughter, nine.
Mother, three.

The husband is the second deceased, and he leaves wife, mother, father. We have now to find, first of all, the second arrangement and the allotments from it, *i.e.* the shares of the estate of the second deceased among his heirs without reference to the first deceased and her estate.

We have :—

H.'s wife, one-fourth.
H.'s mother, one-fourth.*
H.'s father, (residue), two-fourths.

The root is four, and four is also the second arrangement, since none of the shares are broken ; so that the principles of arrangement do not require us to multiply the root. Now four, the allotment in the husband's hands from the first arrangement, quadrates with the second arrangement ; and, as the measure of four divided by four, or one, we get :—

Daughter, nine.
Mother, three.
H.'s wife, one.
H.'s mother, one.
H.'s father, (residue), two.

It will be observed that the daughter and mother of the first deceased, not being related to the second

*For, when there are wife and father, the mother has only one-third of what remains after deducting wife's share (see p. 22).

deceased, take nothing from him ; the rest, not being related to the first deceased, take nothing but the allotments from the second deceased.

Next, daughter dies, leaving two sons, daughter, and her maternal grandmother, who, it must be remembered, is identical with the mother of *proposita* ; proceeding as before, we have :—

Mother (as daughter's true grandmother), one-sixth.
Daughter's two sons and daughter,(residue), five-sixths.

The root is six, and six is also the third arrangement, as there are no broken shares. Nine, the daughter's allotment from the second arrangement, agrees with six in three, and the measures are three and two respectively. We must therefore multiply sixteen by two, and we get the "second product," thirty-two. For the now allotments, (remembering that mother's two portions must be added together), we get :—

Mother, (twice three and three times one). nine.
H.'s wife, two.
H.'s mother, two.
H.'s father, four.
D.'s two sons and daughter, (residue), fifteen.

Lastly, mother dies, leaving husband and two brothers.* Proceeding as before, we have :—

Mother's husband, one-half of two-fourths.
Mother's two brothers, (residue), same.

The root is four ; the fourth arrangement is four also. Nine, mother's allotment from the third arrangement, has no agreement with four, so we must multiply by four, (the whole of the fourth arrangement), and we obtain the third product, one hundred and twenty-eight. For the new (and final) allotments we get :—

H.'s wife, eight.
H.'s mother, same.
H.'s father, sixteen.
Daughter's two sons and daughter, sixty (each son twenty-five, daughter, twelve).

*Observe that husband is not *proposita's* father ; and that the brothers are d. k. of *proposita*, and are therefore not among her heirs.

Mother's husband, eighteen.

Mother's two brothers, eighteen (each nine).

We shall now give another case of vested inheritance, the most complicated that we have as yet met with. This particular case is important, as showing the want of power of the Arabian methods, not, indeed, to produce an accurate result, but to exhibit the result in all cases with the least common denominator.

Wife ; *by her* three sons, B, C, D, and two daughters, E, F ; *by another wife*, a daughter, G. The wife B, C, and G die successively before distribution.*

Wife, one-eighth.

Three sons and three daughters, equal to nine daughters, (residue), seven-eighths.

The root is eight. Now seven, the portion of the sons and daughters from the root, has no agreement with nine, therefore nine multiplied into the root and we get, for the first arrangement, seventy-two. The allotments from the first arrangement are :—

Wife, nine.

Three sons and three daughters, sixty-three, therefore,

Each son, fourteen.

Each daughter, seven.

Wife dies, leaving three sons and two daughters. G, who is not *her* daughter, takes nothing from her ; we have :—

Three sons and two daughters, equal to eight daughters, the whole as residuaries.

The root, is one, since there are no sharers;† eight and one have no agreement, so one must be multiplied by

*Worked out by European arithmetic, Rums. M. L. I., 137.

† See p. 29, note, residue—$\frac{x-(a+b)}{x}$ Therefore, when there are no sharers, residue $= \frac{x-o}{x} = \frac{x}{x} = \frac{1}{1}$

eight (see third principle between shares and persons, Appendix D), and persons we get eight as the second arrangement. The primary portions from the second arrangement are :—

Three sons and two daughters, eight, therefore,
Each son, two.
Each daughter, one.

Now nine was the quantity in the wife's hands from the first arrangement, and between this and the second arrangement there is no agreement ; so the whole of the second arrangement, eight, must be multiplied into the whole of the first arrangement, seventy-two ; and we get five hundred and seventy-six.

The allotments of the heirs of the first deceased must be multiplied by eight, and we get :—

B, C, D, (each), one hundred and twelve.
E. F, G, (each), fifty-six.

Adding, where necessary, we get :—

B, C, D, (each) , one hundred and thirty.
F, F, (each), sixty-five.
G, (as before), fifty-six.

Now B dies, leaving his two brothers C, D, and his two sisters, E, F ; his G. sister, G, is excluded.

Two brothers and two sisters, equal to six sisters, the whole, as residuaries.

The root is one, since there are no sharers.† Six and one have no arrangement, so we multiply one by six and we get six as the third arrangement. The primary portion from the third arrangement are :—

Two brothers and two sisters, six, therefore

*See p. 22.

†For proof of this, see p. 93, note.

Each brother, two.

Each sister, one.

Now one hundred and thirty was the quantity in B's hands from the second arrangement, and this agrees with the third arrangement, six in two, so the measure of the third arrangement, three, must be multiplied into the whole of the second arrangement, by which we must now understand the product or ultimate form of the second arrangement, five hundred and seventy-six ; and we get one thousand seven hundred and twenty eight.

The allotments of the heirs of the second deceased must be multiplied by measure of the third arrangement, three, and we get :—

C, D, (each), three hundred and ninety.

E, F, (each), one hundred and ninety-five.

G, one hundred and sixty-eight.

The allotments of the heirs of the third deceased must be multiplied by the measure of what was in B's hands from the second arrangement, *i.e.*, by one hundred and thirty divided by two, or sixty-five, and we get :-

C, D, (each) one hundred and thirty.

E, F, (each), sixty-five.

Adding where necessary, we get :—

C, D, (each), five hundred and twenty.

E, F, (each), two hundred and sixty.

G, one hundred and sixty-eight.

Next, C dies, leaving his brother, D, and his two sisters, E, F ; G is again excluded.

Brother and two sisters, equal to four sisters, the whole, as residuaries.

The root, as before, is one, and it must be multiplied by four so we get four for the fourth arrangement. The primary portions from the fourth arrangement are :—

Brother and two sisters, four, therefore,

Brother, two.

Each sister, one.

Five hundred and twenty, the quantity in C's hands from the third arrangement, agree with four in four : — so the measure of five hundred and twenty is one hundred and twenty is one hundred and thirty, and the measure of four is one. Proceeding as before, we get for the product simply the same number as the product of the third arrangement (since we only have to multiply by one), one thousand seven hundred and twenty-eight.

Allotments of heirs of the third deceased, multiplied by one, remain as before :—

D, five hundred and twenty.

E, F, (each), two hundred and sixty.

G, one hundred and sixty-eight.

Allotments of heirs of the fourth deceased, multiplied by the measure of five hundred and twenty, or one hundred and thirty ;

D, two hundred and sixty.

E, F, (each), one hundred and thirty.

Adding where necessary :—

D, seven hundred and eighty.

E, F, (each), three hundred and ninety.

G, one hundred and sixty-eight.

Lastly, G dies, leaving one C. brother, D, and two C. sisters. E, F, who succeed to her property in default of brothers and sisters of the whole blood.

C. brother and two C. sisters, equal to four C. sisters, the whole as residuaries.

Root, one ; fifth arrangement, one multiplied by four, or four.

Primary portions from the fifth arrangement ;—

Brother, two.

Each sister, one.

One hundred and sixty-eight, the quantity in G's hands from the fourth arrangement agrees with four in four ; so the respective measures are forty-two and one. The product will still be one thousand seven hundred and twenty-eight.

Allotments of heirs of the fourth deceased remain as before :—

D, seven hundred and eighty.
E, F, (each), three hundred and ninety.

Allotments of heirs of the fifth deceased, multiplied by forty-two ;

D, eighty-four.
E, F, (each), forty-two.

Adding where necessary, we get, as the ultimate portions of the survivors :—

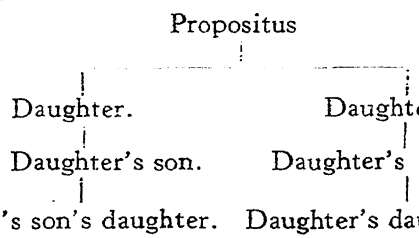
D, eight hundred and sixty-four.
E, F, (each), four hundred and thirty-two.

This last problem, as worked out by European arithmetic, gives the ultimate portions $\frac{2}{4}$, $\frac{1}{4}$, $\frac{1}{4}$; which are, in fact, identical with $\frac{864}{1728}$, $\frac{434}{1728}$, $\frac{432}{1728}$. In this instance, therefore, the Arabian method does not give us the *least* common denominator. This may often happen in cases of vested inheritance, for the addition of the portions derived from the persons who successively die may produce unforeseen combinations of numbers. The European arithmetician, at every stage of calculation, reduces his fractions to their lowest terms ; but for this the old Arabian arithmeticians appear to have had no provision. Consequently, if the earlier arrangements gave them a large denominator, they had no means of diminishing it, but were compelled to remain encumbered with it to the end. Cases of vested inheritance however, are the only problems of Mahommedan inheritance in which the methods of the Sirajiyyah, if properly applied, can fail to exhibit the ultimate portions with the least common denominator.

P. (*p.* 48)

Suppossing that the only relations left are a daughter's son and a daughter's daughter. Here the male will take two-thirds, and the female one-third, according

to the general rule which gives a double portions to the male. But if, on the other hand, there be only a daughter of a daughter's son, and a son of a daughter's daughter, thus :—



Then a contest arises as to the portions that the surviving great-grandchildren are to take ; Abu Yusuf maintaining that the male is to take two-thirds, on account of his sex, Muhammed (with whom the author of the Sirajiyyah seems to agree), that the sex of the grandson, as compared with that of the grand-daughter, ought to decide the question, so that the female, on account of her father's sex, will take two-thirds, and the male, on account of the inferior sex of the parent through whom he traces his relationship, will only take one-third.

P[1]. (*p.* 48. 54)

The example at *p.* 48 presents a simple descent of twelve persons in the lowest line from twelve persons respectively in the highest line, through four intermediate persons in each case. The persons in the lowest line are living persons who inherit ; those in the other lines are deceased persons through whom the property descends ; S (son) stands for male, D (daughter) for female.

According to Abu Yusuf :—

We have only the lowest line ("persons of the branches," *p.* 47) to consider ; there are three S, equal to six D, and there are nine actual D ; therefore the estate must be divided into fifteen (six and nine) parts, and we have :—

Three S, six-fifteenths, (each), two-fifteenths.

Nine D, nine-fifteenths, (each), one-fifteenth.

According to Muhammed :—

We have to consider every line in order, beginning with the highest, because that is the first in which the sexes differ. The following figure, with the explanations given afterwards, will show what are the imaginary portions of the deceased persons, and the actual portions of the living persons*:—

2	2	2	1	1	1	1	1	1	1	1	1
15	15	15	15	15	15	15	15	15	15	15	15
2	2	2	1	1	1	1	1	1	1	1	1
15	15	15	15	15	15	15	15	15	15	15	15
1	1	1	1	1	1	1	1	1	1	1	1
5	10	10	10	10	10	20	20	20	20	20	20
1	1	1	3	3	3	1	1	1	1	1	1
5	10	10	20	40	40	15	15	15	30	30	30
1	2	1	3	3	3	1	1	1	1	1	1
5	15	15	20	40	40	10	20	20	20	40	40
1	2	1	3	1	1	1	1	1	1	1	1
5	15	15	20	10	10	10	30	15	20	30	60

The fractions in the first (highest) line are arrived at by simply giving each male a double portion ("the property...among the roots," *p.* 48). The $\frac{6}{15}$ of the group of three males will go exclusively to their own descendants, the $\frac{9}{15}$ of the group of nine females exclusively to theirs ("then the males.....to the females," *ibid.*).

In the second line, as there is no difference of sex, there is no change.

In the third line, descendants of the group of three males are one S and two D; the S, as usual, takes a double share ; in other words, he takes half of $\frac{6}{15}$ or $\frac{1}{5}$ while each D takes a quarter of $\frac{9}{15}$ or $\frac{1}{10}$. Similarly, the $\frac{9}{15}$ of the group of nine females is divided among their

*We avail ourselves of a figure similar to that in the text (*p.*48); we see European arithmetical notation instead of words, as we believe that the process will thus be more readily understood.

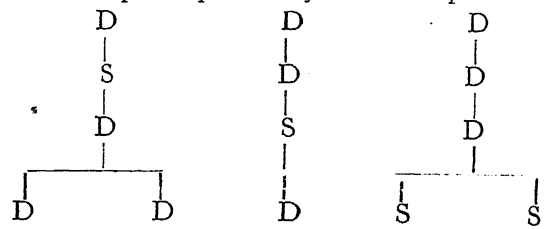
three S, equal to six D, and their actual six D, each S taking $\frac{1}{3}$ of $\frac{1}{2}$ of $\frac{9}{15}$, or $\frac{1}{10}$, each D, $\frac{1}{6}$ of $\frac{1}{2}$ of $\frac{9}{15}$ or $\frac{1}{20}$. Instead of the two original groups, we now have one S standing alone, isolated by the grouping of the others, and forming as it were, a group by himself; then two D, three S, six D, each set forming a separte group.

Pursuing the same course in the remaining lines ("and thus.....to the end," *p.* 48), we arrive ultimately at the fractions given in the lowest line, which, when reduced to the l. c. d., are:—

$\frac{12}{60}, \frac{8}{60}, \frac{4}{60}, \frac{9}{60}, \frac{5}{60}, \frac{6}{60}, \frac{6}{60}, \frac{2}{60}, \frac{4}{60}, \frac{3}{60}, \frac{2}{60}, \frac{1}{60}$.

It will be seen that this distribution, though partly the result of representation, is very different from that which would be produced by *pure* representation. The difference is caused by the curious process which we have called "grouping." In finishing the working of this example, and in working out other examples by Muhammed's rule, we must always remember in each line to group the males and females respectively, and to keep the property of each group when once formed, and that of each individual once isolated by the grouping of others, exclusively for the descendants of such group or individual.*

The example at *p.* 49 may be thus represented:—



According to Abu Yusuf, on the same principles as before, we have:—

*Thus, for instance, the portions of the isolated S, the two D, the three S, and the six D, in the third line, will never be mixed up again, but will go exclusively to their respective descendants in all the subsequent lines.

Three D, three-sevenths, (each), one-seventh.

Two S, four-sevenths, (each), one-seventh.

According to Muhammed :—

In the second line, being the first in which the sexes differ, S, having two descendants among the claimants, is equal to two males or four females ; the two D form a group, and the second D, having two descendants among, etc., is equal to two females ; hence we have :—

S, four-sevenths.

Two D, three-sevenths.

The portion of S, who is thus isolated, goes to his daughter ; that of the group goes to one S and one D, the former equal to two females as being a male, the latter, as having two descendants among, etc. : hence we have in the third line ;—

1st D, four-sevenths.

S, one half of three-sevenths, or three-fourteenths.

2nd D, same.

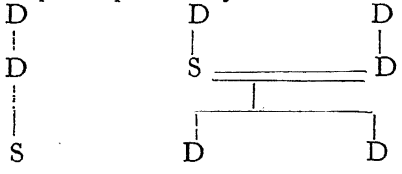
Each person is now isolated, so that there is no further grouping ; hence we have in the fourth line :—

1st and 2nd D, four-sevenths, (each), two sevenths, or eight twenty-eighths.

3nd D, three-fourteenths, or six twenty-eighths.

Two S, three-fourteenths, (each), three twenty-eighths.

The example at *p.* 50 may be thus exhibited :—



According to Abu Yusuf, we have :—

S, two-sixths,

Two D (equal to four females by reason of double descent), four-sixths (each), two-sixths.

According to Muhammed :—

In the second line, being the first in which the sexes differ, the two D form a group, and one of them is equal to two females as having two descendants among, etc. S is equal to two males or four females, having also two descendants, etc, ; hence we have :—

Two D, three-sevenths.

S, four-sevenths.

The portion of S, who is isolated, goes entirely to his daughters; that of the group goes among all the claimants, the male taking a double portion ; hence we have in the third line :—

S, one half of three-sevenths, or six twenty-eighths.

Two D, four-sevenths *and* one-half of three-sevenths, or eleven fourteenths, (each), eleven twenty-eighths.

The example at *pp.* 53, 54, may be thus stated : Brother's daughter, sister's son and daughter, corresponding C. and U. relations.

According to Abu Yusuf, the whole blood relations exclude the others ; and, in their absence, the C. would the U. relations ; in any case the male would take a double portion.*

We have, therefore, according to circumstances :—

Brother's C. brother's or U. brother's daughter, one-quarter.

Sister's C. sister's or U. sister's son, two-quarters or one-half.

Sister's etc., daughter, one-quarter.

According to Muhammed, we have primarily :—

U. brother and sister, (sharers), one-third.

Brother and sister, (residuaries), two-thirds.

(C. brother and sister excluded by brother.)

But U. sister is equal to two persons,† having two

*This applies to children of U. brothers and sisters, equally with those of whole-blood and C. brothers, etc. see "then among the branches by the same mother," etc., *p*, 54 ; it is otherwise according of Muhammed (see *ibid.*).

† We say "persons," instead of *females*, because U. sisters take equally with U. brothers, without the usual distinction of sex (see *pp.* 16, 17).

descendants among the claimants ; brother is two females as being a male, sister, as hav descendants among, etc., hence we have :—

U. brother, one-third of one-third, or one-n

U, sister, two-thirds of one-third, or two-n

Brother, one-half of two-thirds, or one-thir

Sister, same.

The portions of the males will descent unc as each has only one child ; that of U. sister equally between her son and daughter ;* that goes in the usual way, *i.e.*, a double portion son ; hence we have, ultimately :—

U. brother's daughter, one-ninth.

U. sister's son, one-half of two-ninths, ninth.

U. sister's daughter, same.

Brother's daughter, one third, or three-nint

Sister's son, two-thirds of one-third, or two

Sister's daughter, one-third of one-third, ninth.

Q. (*p.*64)

This example is thus worked out †: —

Father, one-sixth.

Mother, same.

Daughter, one-half.

Wife, one-eighth.

Sons (unborn), residuaries, or,

* See "a third...is divided equally, " etc., *p.* 54 ; it i according to Abu Yusuf *(see ibid.*, and *p.* 102*)*.

†Worked out by European arithmetic. Rums, M. L.

Daughters (unborn), taking two-thirds with the existing daughter.

Suppose, first, that the unborn children will be sons ; then the root is twenty-four. Suppose, secondly, that the unborn children will be daughters ; then we shall have, primarily, twenty-four for the root ; but the shares from the root will be four, four, sixteen (the daughter's share being two-thirds), and three, or twenty-seven in all. Consequently it is a case of increase, and the root becomes twenty-seven.

Twenty-four and twenty-seven in three, therefore according to the rule given in the text, we must multiply the measure of one of the roots into the whole of the other (*i.e.*, eight into twenty-seven, or nine into twenty-four), and we get two hundred and sixteen. This number is the arrangement of the case, and we get, multiplying the portions from the root (except the daughter's) first by nine, and then by eight :—

Father, thirty-six.
Mother, thirty-six.
Wife, twenty-seven.
And :—
Father, thirty-two.
Mother, thirty-two.
Wife, twenty-four.

The smaller shares thus ascertained are given at once, the excess of the larger over the smaller is reserved, that is to say, four parts from each parent's share, and three parts from the wife's.

The above application of the rules already known is simple enough, but with regard to the sons' or daughters' shares, the working of the rule is more complicated.

On the supposition that there will be sons, there will be only one daughter. It is supposed by the Arabian Jurists that there may be four sons at a birth; and therefore enough must be kept back to meet their possible claims. The daughter will be made a residuary by the

sons, and she can only take, in such case, one-half of what each son takes, or one-ninth of the whole residue. Consequently, as we have at present disposed of eighty-eight two hundred and sixteenths, and have reserved eleven, so that there are only one hundred and seventeen to be considered, we have:—

Daughter, one-ninth of one hundred and seventeen, or thirteen; portion of four sons, eight- ninths of the same, or one-hundred and four.

We have therefore reserved ;
Out of the father's share, four.
,, Mother's ,, four.
,, wife's ,, three.
Portion of four sons, * one hundred and four.
Or one hundred and fifteen in all.

The concluding paragraph of the chapter shows how the reserved portions are to be disposed of, according to the eventualities that may occur :—

If the wife bring forth a daughter or daughters, then she or they, with the elder daughter, being entitled (as seen above) to sixteen from the root, will take, from the arrangement, sixteen multiplied by eight, or one hundred and twenty-eight which will make, in all, one hundred and twenty-eight two hundred and sixteenths, or sixteen twenty-sevenths. The other heirs, in this case, will not recover any of the reserved portions, since the whole is exhausted. We know, from the early part of the case, that this should be so, and we find that it is

* We reserve the portion of four sons because it is greater than the portion of four daughters (see " whichever of the two is most. " P 61) ; it is clear that the share of five daughters (the living one and four after-born) would be sixteen multiplied by eight, or one hundred and twenty-eight, of which four-fifths would be less than one hundred and four.

so, since thirteen, the portion given to the elder daughter, and one hundred and fifteen, the entire portion reserved, together make up exactly one hundred and twenty-eight.

On the other hand, if there are sons, they will be residuaries, and the father, mother, and wife will take their shares in full, that is to say, they will recover the reserved portions, before the residue is divided ; and, of course, the daughter will be a residuary, and will take half as much as each son. If there are four sons, the thirteen already paid will be her just share, but if not, she must receive so much more as the circumstances render necessary. Lastly, if the child be born dead, the father, mother and wife will recover the portions reserved from their shares ; the daughter being, on this supposition, entitled to twelve from the root twenty-four, will take twelve multiplied by nine, or one hundred and eight, from the arrangement. This (inclusive, of course, of her thirteen already received) will obviously be her proper share, one- half. The father, it will be remembered, is a residuary as well as a sharer, since there are no sons. He will, therefore, in addition to the thirty-six parts already received, take the nine parts that are left, after payment of thirty-six, thirty-six, twenty-seven, and a hundred and eight, the shares above calculated. Consequently he will receive thirty-six and nine parts, or forty-five parts in all.

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